PORGROW National Report: SPAIN

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SECTION 1: THE EPIDEMIC OF OBESITY

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1.1. In Adult Population

The method used for the evaluation of body fat is anthropometrical by recommendation from the consensus of the Spanish Society for the study of Obesity (SEEDO)[1] in 1995,. This can be used both in clinical practise and in epidemiological research to assess obesity. It takes into account the weight, height, the body circumferences and the skin pleats, according to the age and sex. Additionally, the Body Mass Index (BMI) has been also recommended as an indicator of the adipose tissue in epidemiological studies performed in the adult population aged between 20 and 69[2]. In its definitions for measurement was established by the WHO and used as the reference[3].

Later in 2000, Spain set international standards for the categorization of obesity as set by consensus by the SEEDO[4] with some differences regarding the WHO classification. Specifically as shown in table 1, the SEEDO widens the overweight and obesity type I categories, and introduces a new degree of obesity (obesity degree IV or extreme obesity BMI > 50 kg/m^2). In spite of this, the criteria of the definition of obesity are similar to the ones set by the WHO. (ICM>30kg/m^2).

Table 1. Classification of overweight and obesity according to the Index of Body mass (BMI) in accordan ce to the criteria defined b y the WHO [1] and SEEDO-2000[2]

Classification WHO[1]	Limit Values of the BMI kg/m^2	Classification SEEDO-2000[2]	Limit Values of ICM kg/m^2
		Insufficient weight	< 18,5
Normal weight	18,5-24,9	Norm weight	18,5-24,9
Overweight (obesity degree I)	25-29,9	Overweight degree I	25-26,9
		Overweight degree II	
		Overweight degree II (Pre obesity)	27-29,9
Obesity degree II	30-34,9	Obesity of type I	30-34,9
Obesity degree III	35-39,9	Obesity of type II	35-39,9
Obesity degree IV	≥ 40	Obesity of type III (morbid)	40-49,9
		Obesity of type IV (extreme)	> 50

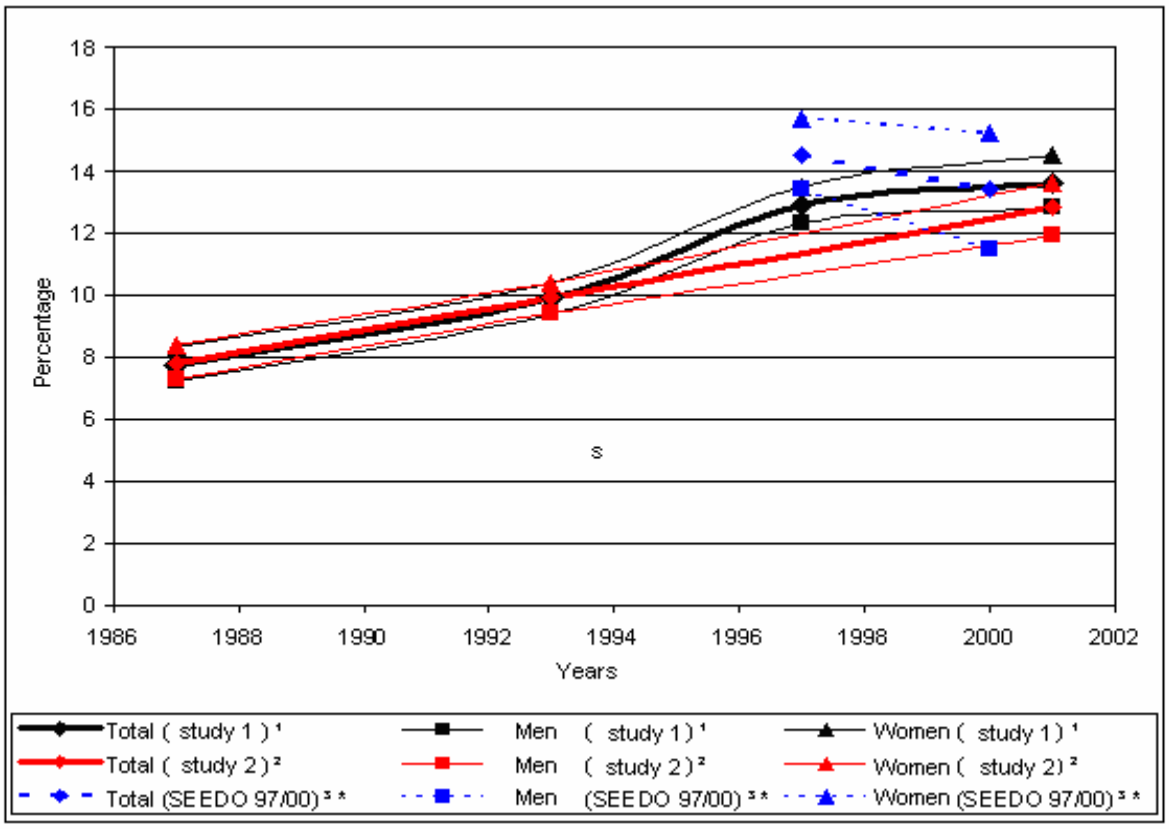
Source: [1] WHO. *Report of a WHO consultation on obesity*. Geneva, 3-5 June, 1997. Geneva: WHO; 1998.[2]Spanish Society for the Study of Obesity (SEEDO). *Med Clin (Barc)*2000; 115: 587-597.

In Spain the prevalence of both overweight and obesity of all kinds, have increased according to the different studies reported since 1987. Overweight is more common in men than in women, and obesity was more prevalent among women during the 1987 -2001 period. Several cross-sectional studies have been done with slight differences in methodologies and hence showing two types of information:
-One is the self referred data of weight and height obtained in the Spain's National Household Health Survey (ENS in Spanish) since 1987. This is performed through interviews performed at homes about non - institutionalized population representative samples from 16 year old onwards.
-The other is more recent studies on cross-sectional nutritional epidemiological studies performed since 1989 on random population representative samples of different autonomous communities.

Graph 1. shows an overall picture of obesity in Spain of the total population and also by sex from different surveys from 1987 to 2001. The first studies belong to two revisions of data provided by the ENS and the following data provided from the SEEDO, with different information concerning the prevalence of obesity. However, according to the ENS there is clear evidence that obesity has risen between 1987 and 1997, whilst such a raise cannot be confirmed for the 1997 -2001 period.

The National Health Surveys show that the prevalence of obesity in the population aged 20 and older has risen from 5% to 6%, between 1987 and 2001[5, 6]. There was a higher increase among women (6,2%) than in men (5,6%)[5]. The obesity prevalence rose by 2%[7] between 1987 and 1993. Between 1987 and 1993 each increase unit of the medium of the BMI ($\geq$ 30 kg/m2) is associated to the absolute raise of 5.1% (95% CI 3. 3-6.8%). Contrarily, the correlation between the change in the indicator of medium corporal BMI and the overweight prevalence (ICM: 25-29,9 kg/m2) was stronger (r= 0.81, P< 0.001)[8], having into account that the overweight prevalence for 1993 was 36% (M: 43%, F: 29%)[9]. Obesity rose by 5% between 1987 to 1997 which implied a growth above 60% in those ten years, with a change of 71% in men and 63% in women[10]. Between 1987 and 1995/07, obesity prevalence raised in men 4.6% (P<0,01) and in women 3.2% (P< 0.01). The increase was higher at 6,2% for men, aged between 45 -54 (P< 0.05), and at 2.2% for women aged 25-34[11]. The global average overload of overweight prevalence and obesity in the Spanish population above 16 years of age with BMI $\geq$ 25 kg/m2 raised from 41.4% in 1987 to 48.6% in 1995/97. It is higher in women (5.6% in 1987 to 40.9% in 1995/97) than in men (47.1% in 1987 to 56.2% in 1995/97)[12] .

Graphic 1. Prevalence of Adult's obesity in Spain (1986-2002) based on epidemiological studies from the National Health Surveys (ENS) and the Spanish Society for the Study of Obesity (SEEDO) according to the index of body mass (BMI) ≥ 30kg/m2.



Sources :
¹ Study 1 Revision: Gutiérrez-Fisac JL,et al. SESPAS Report 2006. (Non-published document)
² Study 2: Revision: Revisión: Martínez MA, et al. Obesity Reviews 2004; 5:171-72
³ Study 3 SEEDO: Aranceta J, et al. Med Clin (Barc). 1998; 111(12):441-45.
* Study 4 SEEDO: Aranceta J, et al. Med Clin (Barc). 2003; 120(16):608-12

Graph 1, also shows a high prevalence of obesity in 1997 and 2000, according to the cross sectional epidemiological nutritional studies performed in the different autonomous communities in population between 25 to 60 years of age, with higher prevalence than the estimated using the self referred data (weight and height referred by the interviewed ones) of the ENS. This is likely due to the fact that when interviewed, people tend to underestimate their weight. Conversely, they tend to overestimate their height, causing errors in the BMI value. The SEEDO 97 estimated an obesity prevalence (BMI≥30) of 13,4% for the group population aged 25 to 60 (15,2% in women and 11,5% men). The global average overload (overweight + obesity BMI ≥ 25) is 52,85% (58,9% in men and 46.8% in women). This study reports data obtained from the nutritional surveys performed between 1989 and 1994 in four autonomous communities (Basque country, Catalonia, Madrid and Valencian Community) with a sample of 5388 individuals (2533 men and 2855 women) [13]. In 2000, the data base was completed with information of other autonomous communities such as Andalusia, Canaries, Balearic Islands and Galicia (n= 9885, men= 4707,

women = 5178) [14]. The results show that the obesity prevalence in the adult population BMI ≥ 30 was 14,5% significantly higher in women (15,75%) than in men (13,39%). The results in the distribution of the prevalence in this study confirm the preliminary findings obtained in the SEEDO 97 study.

Table 2 shows the prevalence for overweight between 1987/97 in the population group aged 25-64, according to data of ENS and SEEDO for the year 2000. This is determined by age and sex. In all years, overweight is higher in men than in women, it raises with age, and the higher risk is between 45 – 64 years of age.
For the period 1987 – 97, the overweight prevalence raised by 2,2% (P<0.01) being higher in men (3,8%; P<0.01) than in women (0,6%, P>0.05). The higher increase was between 25-34 years of age (Men 5,2%; P<0.01, Women: 2,3%; P<0.05). The overweight prevalence, determined by age, raised in all the educational groups in both sexes. The increase was higher in people with lower educational levels with the exception of overweight in women who have less than 12 years of studies with an absolute change of 0,6%.[11]In the year 2000, 39% of the population was classified as overweight in average, being higher in men with 45% than in women with 32%. It rises with age, especially for those 45 and over [14].

Table 2. Prevalence (%) of overw eight in men and w omen by age grou p from epidemiologic al studie s of information o f the National Health Surveys (ENS) [1], and of the Spanish Societ y fo r the Study of Obes ity (SEEDO 2000) [2] 1987-2000

Age group	Men			Women		
	[1] 1987	[1] 1997	[1] 2000	[2] 1987	[1] 1997	[1] 2000 [2]
Total	19,2	22,9	45,0	12,9	13,5	32,0
25-34 years old	10,8	16,0	35,6	4,4	6,7	20,4
35-44 years old	19,0	23,4	47,7	12,8	9,7	31,7
45-54 years old	25,1	27,4	51,5	19,8	21,0	42,8
55-64 years old	26,1	28,3	52,3	20,4	22,4	42,1

Source:
BMI= 27-29,9 kg/m[1] Gutierrez-Fisac, et.al. Int Obes Relat Metab Disord. 2000 Dec;24(12):1677-82
BMI= 25-29,9 kg/m[2] Aranceta J, et al. Estudio SEEDO 2000. Med Clin (Barc)2003;120:608-612

Table 3. shows the evolution for the prevalence of obesity in the Spanish population aged 20 and older, between 1987 to 2001, as well as the absolute change by educational attainment . By age, all groups increased, with the exception of the group aged 45 – 64 which reduced between 1997 – 2001. The higher increase was seen between 65 years of age and older, followed by the group aged 45 – 64.[15]

The frequency of the obesity raised in all the groups of age, sex and level of studies according to the ENS. The prevalence of the obesity was higher in individuals with low education, with an increase of 9,6% between 1987 to 2001[15] . In men and women the higher prevalence of obesity was observed in the lower educational levels, during the 1987 and 1993 period. During the same period, these differences raised more in women, whilst the same ones decreased in men.[16] Most of the adult Spanish population was concentrated in the primary educational level in 1987, especially between 45 – 64 years of age (78% men and 88% women). Between 1995/97 the percentage of population with primary education decreased in all age groups as in men as in women. [17] Between 1987 to 1997, prevalence was higher as in men (9,2% in 1987 and 21,8% in 1997) as in women with no studies (13,5% in 1987 and 20,2% in 1997). The absolute change raised 12,6% for the group of men and 6,7% for the female group. This increase was 7,2%, 6,3% and 5,7% in men with primary, secondary and further education studies accordingly. The pattern is the same in the group of women, with the exception of those with further studies where the prevalence dropped by 1,3%[10]. For SEEDO, women older than 45 and with a low education were the sub group who showed the higher prevalence of obesity.[18]

Table 3. Prevalence of obese population per year and level of education in Spain, 1987-2001

	1987	1993	1997	2001	Prevalences difference 1987-01
Total	7,7	9,9	12,9	13,6	5,9
Sex					
Men	7,2	9,4	12,3	12,8	5,6
Women	8,3	10,4	13,5	14,5	6,2
Groups: year-age					
20-44	4,1	5,2	7,2	7,7	3,6
45-64	12,4	15,1	19,2	18,8	6,4
65 y +	13	16,3	20,5	22,3	9,3
Education					
No studies/no formal	11,3	17,1	21,8	20,9	9,6
First degree/primary	8,3	11	15,7	16,5	8,2
Second degree/secondary	4,7	6	11,5	11,4	6,7
Third degree/university	4,1	4,3	10,1	9,4	5,3

Source: Gutiérrez-Fisac JL et al. *Med Clin (Barc).* 2005 Feb 12;124(5):196-7.
Gutiérrez-Fisac JL, Royo Bordonada MA, Rodríguez Artalejo F. Riesgos asociados a la dieta occidental y al sedentarismo: la epidemia de obesidad. En: Informe SESPAS 2006. Barcelona: SG Editores . (Risks associated to the Western diet and the passiveness: the epidemics of obesity. In : SESPAS 2006 report.)

Social class is another socio-economic factor associated with the prevalence of obesity in adult population. Although there are some difficulties in the comparative analysis of the prevalence of obesity by social class (differences in

the operational definition of its variables) all the different studies, agree in concluding that the prevalence of obesity in Spain is higher in lower social classes.[19,18, 14]

It also highlights the importance of taking into account the body image within a gender perspective[20]. Thus, a study was found which analysed indicators of the ENS 97 from a perspective of gender inequalities, social class (measured with 4 categories, from the I – the wealthiest to the IV), and labour condition (5 categories: employed, unemployed, retired, housewife and other conditions).
Among women of class I, the average overload prevalence (overweight + obesity) is of 25%, whilst in the lower classes doubled. Among men, those unemployed show a lesser average burden of obesity (45% vs 61% in the employed ones), whilst in the group of women it is lower among the ones with jobs and unemployed (active population) [19]. The marital status also has a positive influence in the prevalence of obesity, being significantly higher in married women.[18]

The geographical distribution of obesity by regions and autonomous communities in Spain show higher prevalences in the North East and South East regions. [20, 22, 14] The higher points are shown in Cantabria (16,9%), Asturias (14,1%), Extremadura (15%), Castilla La Mancha (14,8%), Andalusia (18,9%), Murcia (13,8%), Community Valenciana (13,5%) and Canaries (13,4%)[6]. The rural areas show higher prevalences of obesity in men, whilst in urban areas it is higher for women. [18]

1.2. In Infant Population

Concerning infant population, the frequency of overweight and obesity also have a great impact. To determine the impact of infant obesity in Spain, some methodological problems have been shown when analysing the data regarding age, height and weight with the definition of the threshold of a fixed percentile and of the BMI.

The definition of overweight and obesity by percentile is useful to compare sub population groups regarding an average point, but does not allow quantification of the impact of obesity in a country or the comparison between countries, unless BMI charts can be used as reference[23]. The BMI related to the age and sex is an accepted indicator for the estimation of obesity in children aged 2 and 18, both for epidemiological studies and for the clinical setting [24] Contrary to the case of adult population, in Spain there is not consensus to determine the cutt-off values of BMI. A study[24] links the different publications on different referral values for the Spanish population, such as the Orbegozo Foundation studies done in 1988[25] and 2000[26] , EnKid[27] report, and centre Andrea Prader[28].

Overweight (BMI≥ 25 kg/m2) and obesity (BMI≥ 30 kg/m2) have been defined, based on the criteria of the value of the Index of Corporal Mass. As threshold it has been considered the values related to percentile 85 (overweight) and

percentile 95 and 97 (obesity) specific for age and sex in the referral distribution for the population of that age, according to the Orbegozo Foundation.[29]

In Spain the overweight and obesity prevalence have raised, according to studies reported since 1984 in populations between 2 to 18 years of age.[30, 25]. Recent data appeared in the EnKid study performed between the years 1998 and 2000 on population sample of 2 to 24 years of age. [29]

Table 4 taken from Serra Majen L and his colleagues [29] show the trend of obesity in the percentile (p)95 of the BMI between 1980 to 2000, taking into account the methodological limitations related to secular comparisons[26]. It compares the three epidemiological studies performed in Spain, - Paidos (1984)[30], Ricardin (1992)[31] and EnKid (1998/2000) [29]. In 1984, 4,9% of children between 6 to 15 were obese (5,1% boys and 4,0% girls). In 1998 – 2000 prevalence of obesity is 15,6% in boys and 12% in girls of 2 to 24 years of age (7,6% and 3,9% according to the international standards[32]. The BMI in children aged 10 have changed from 18,1 kg/m2 in 1984 to 18,5 in 1992 and 18,8 in 1998-2000. By 13 years of age, 18,4 kg/m2 in 1984, to 20,4 in 1992 and to 21,1 in the period 1998 – 2000.
This increase is more evident in boys: young and in their early adolescence (6 and 10 years old), and in girls in the late adolescence (18 years old). It is lower in little children who at times show a decrease. Between children aged 6-7, the overweight percentage varies between 29-35% and the obesity one varies between 8 to 16% according to the province of residence.[33]

Table 4. Trend in the percentile (p) of the BMI between 2 to 18 years of age in Spain. 1980-200 y 1992-2000

Tendency 1980-2000						
Study 1: Hernández et al, 1980				Study 3: EnKid, 1998/2000		
Year-ages	Men p95	Women p95	Raise (%)	Men p95	Women p95	Raise (%)
2 years	19,2	19,2	4,0	20,0	18,8	-2,1
6 years	18,7	19,7	12,6	21,4	21,1	6,6
10 years	21,0	21,7	14,6	24,6	23,3	6,9
14 years	24,3	25,5	12	27,6	25,7	0,8
18 years	27,0	24,3	7,8	29,3	27,0	10,0
Tendency 1992-2000						
Study 2: Ricardin , 1992				Study 3: EnKid, 1998/2000		
Age-years	Men p95	Women p95	Raise (%)	Men p95	Women p95	Raise (%)
6 years	20,7	21,0	15,2	24,4	22,8	7,9
10 years	23,2	23,9	2,1	23,7	25,0	4,4
14 years	26,1	27,8	14,1	30,4	27,4	-1,5
18 years	29,5	27,6	2,0	30,1	28,3	2,5

Taken from: Serra-Majem L, et al. *Med Clin (Barc)* 2003 Nov 29; 121(19):725-32.
Study 1: Hernández et al, 1980. Fundación F. Orbegozo. Editorial Garsi, 1988.
Study 2: Ricardin , 1992*An Esp Pediatr* 1995;43:11-7.
Study 3: EnKid, 1998/2000 Serra Majem L, et al. Vol 2.Barcelona: Masson; 2002:81-108.

Table 5, shows the prevalence of overweight and obesity, by sex and age groups in infant and young population for 1998/2000. Obesity prevalence is 13,9% according to the 97 percentile (p97) [26] and the overweight of 12,4% being in both cases higher in men than in women. By ages, obesity and overweight are higher in the pre adolescence phase (6 to 13 years old), especially in men, whilst obesity is higher amongst the youth (18 to 24 years old).

Table 5. Prevalence of overweight and obesity in the infant population 1998-2000

Age (years)	Prevalence					
	Overweight* ≥ p85-< p97		Obesity* ≥ p97		Overweight, obesity and	obesity* ≥ p85
Total						
2-5	9,9	(6,8-13 0)	11,1	(7,9-14,3)	21,0	(16,8-25,2)
6-9	14,5	(11,1-17,9)	15,9	(12,4-19,4)	30,4	(26,0-34,8)
10-13	14,6	(11,7-17,5)	16,6	(13,5-19,7)	31,2	(27,3-35,1)
14-17	9,3	(7,1-11,5)	12,5	(10,0-15,0)	21,8	(18,7-24,9)
18-24	13,2	(11,5-14,9)	13,7	(11,9-15,5)	26,9	(24,6-29,2)
Total	12,4	(11,3-13,5)	13,9	(12,7-15,1)	26,3	(24,8-27,8)
Men						
2-5	9,3	(5,2-13,4)	10,8	(6,4-15,2)	20,1	(14,4-25,8)
6-9	16,0	(11,0-21,0)	21,7	(16,1-27,3)	37,7	(31,1-44,3)
10-13	20,0	(15,3-24,7)	21,9	(17,0-26,8)	41,9	(36,1-47,7)
14-17	10,4	(7,1-13,7)	15,8	(11,9-19,7)	26,2	(21,5-30,9)
18-24	14,9	(12,0-17,8)	12,6	(9,9-15,3)	27,5	(23,9-31,1)
Total	14,3	(12,6-16,0)	15,6	(13,8-17,4)	29,9	(27,7-32,1)
Women						
2-5	10,4	(5,9-14,9)	11,5	(6,8-16,2)	21,9	(15,8-28,0)
6-9	13,1	(8,5-17,7)	9,8	(5,8-13,8)	22,9	(17,2-28,6)
10-13	9,1	(5,7-12,5)	10,9	(7,2-14,6)	20,0	(15,3-24,7)
14-17	8,0	(5,1-10,9)	9,1	(6,0-12,2)	17,1	(13,1-21,1)
18-24	11,3	(9,2-13,4)	14,9	(12,5-17,3)	26,2	(23,3-29,1)
Total	10,5	(9,1-11,9)	12,0	(10,5-13,5)	22,5	(20,6-24,4)

Taken from: Serra-Majem L, et al. *Med Clin (Barc)* 2003 Nov 29; 121(19):725-32.
*cutt-off points: percentiles (p) 85 and 97 from the Hernandez's charts el al., 1988.

Table 6 shows the prevalence of obesity and overweight according to some socio-economic variables, which follow a pattern similar to the one observed in the adult population. Hence, obesity is higher in low social economic and educational levels[29]. Prevalence of obesity is higher in men whose parents only completed the basic level of studies, especially in the case of most mothers. The level of education of the mother seems only to influence the youngest children up to 10 years old. It seems to be that no significant statistic differences have been observed in the prevalence of obesity regarding the work of the mother outside home. The prevalence of obesity is higher in boys and girls coming from a lower socio- economic level.

Table 6. Prevalence of overweight and obesity in the infant population from 2 to 24 years old, according to the socio-economic variables in the EnKid Study 1998-2000

Variable	Obesity ≥ p97 (%)	Overweight and obesity ≥ p85 (%)
Size of the population or residence		
(n.° of inhabitants)		
< 10.000	13,7	26,2
10.000-50.000	14,7	25,8
50.000-350.000	13,5	27,8
> 350.000	13,5	25,1
X_2 for trends	0,739	0,660
Region		
Centre	15,3	27,5
North East	9,8	21,8
North	12,3	25,0
South	15,6	29,4
Levante	15,0	25,2
Canaries	18,0	32,8
X2	0,001	0,002
Level		
Socio-economic		
Low	15,1	28,1
Middle	13,5	24,5
High	12,0	24,5
X_2 for trends	0,005	0,002
Level of instruction of parents		
Low tos two	15,6	29,1
Income – mother	14,1	25,8
Low income – father		
High. Father/ Low income/ mother	10,9	22,5
High: mother	13,5	24,8
X_2 for trends	0,148	0,020

By geographical zones, the highest prevalence rates of obesity and overweight are in the Canary Islands and the south region, both in boys and girls and in all age groups. The lower rates were shown in the north east and Valencian Community. Regarding the medium, in the North and Midlands, the size of the resident populations does not seem to express a pattern of defined distribution for the average overload.[34]

SECTION 2: ESTIMATED COSTS OF OBESITY

Rocio Ortiz, Gaby Margarita Ortiz and Carlos Alvarez-Dardet

1. Introduction

The economic costs associated to obesity and the problems caused by it are high in Spain. This includes both the direct costs of health care and the indirect ones associated to the loss of productivity caused by the sicknesses and disability. A study with the participation of different organizations and professional societies, estimated the cost of obesity in 1995 using the Delphi technique.[35] To measure the annual economic impact of obesity in this work, they took as reference the methodology used by Wolf and Colditz. [36]

In a first phase, they adopt the focus denominated of prevalence which considers the costs of the cases of obesity and the associated pathologies (including diabetes mellitus non insulin dependent – type 2- cardio vascular diseases and rheumatic disease) that appears in a certain period, independently of when they started or were diagnosed or of when the corresponding processes finished. The direct costs were defined as all those involved in the diagnostics, treatment and follow up of these patients. The indirect costs were calculated considering the productive loss due to the premature mortality and the sickness leaves and permanent disability produced as a result of the problems associated to obesity.

In a second phase the calculated costs are praised by a fraction attributed to the obesity in each case (Diabetes type 2, cardio vascular disease and rheumatic disease). For the indirect costs, the same pattern was applied. The direct and indirect costs are the total cost linked to obesity.

2.1 Obesity costs in the Health

Direct Costs:
The direct costs are worked from the ambulatory costs for medical appointments, pharmacy and other costs associated and the costs of hospitalization. [35]

Table 7, shows these health care resources as spent by obesity and other associated diseases. Hence, obesity is responsible for the 57% of the total costs of diabetes type 2, and 19% of the direct costs to the cardio vascular disease is also linked to obesity.

The problem closely linked to obesity is the knee arthrosis accounting for 10%. For the direct cost of obesity its measurement was more complicated, because according to some authors other costs have to be considered as those from the pharmacy, diet products, and cabin treatments among others. The relative costs were not included either in the hospital resources consumption of the muscle skeleton diseases by the morbidity obesity cases.

Table 7. The estimated health servi ce costs fo r treating obesit y and consequential diseases, Spain: 1995

Consequentia l diseases	Nº outpatient attendance	Cost by episod e	Number of hospital discharg es	Number of hospital stages	Attributa ble fractio to obesity
Diabetes mellitus	10.182.500	380.29 7	28.647	371.008	57%
Cardiovascular diseases - High Blood Pressure - Coronary heart disease - Stroke -Peripheric vascular diseases	26.462.300 5.315.600 4.750.700 4.124.000	612.20 3 524.17 1 483.41 7 407.50 8	14.752 101.575 69.495 -	137.983 410.226 447.204 -	19%
Dislipidemias	8.665.500	-	-	-	19%
Rheumatic Diseases -Artrosis of the Knee	1.631.100	-	-	-	10%
Obesity	2.257.600	-	-	-	100%

Source: White book: Social and economical cost of the obesity and derived diseases.1999: 51-66. Data are expresed in million of euros

Indirect Costs:

Table 8 shows the variables related with the indirect costs, the health problems related with the obesity defined in the Delphi study.[35] The premature mortality (Potencial Years of Life Lost) as the consequence of death by health problems was determined and linked to obesity until the age of 64. A quantification of the productive loss during the interval of productive age was also calculated .

Each year of life lost is corrected by the probability of dying as a consequence of any other event at any age. The resultant value praised by the rate of employment for the age and sex is multiplied by the total medium annual salary for the year 1995. The labour incapacity was determined in two levels: temporal

(labour transitory incapacity of 18 months maximum) and permanent or incapacity. In 1995 out of the total funding allocated to cover the temporary incapacity, the cardiovascular diseases spent 5-6% of the resources, and more than a third were for the ischemic heart disease. In regard to permanent disability, the cardio vascular diseases, diabetes mellitus, obesity and gonarthrosis, spent 17,3% of the expenses which are distributed: 5,7% gonarthrosis, 10,3% cardio vascular diseases, 1,3% diabetes mellitus and obesity.

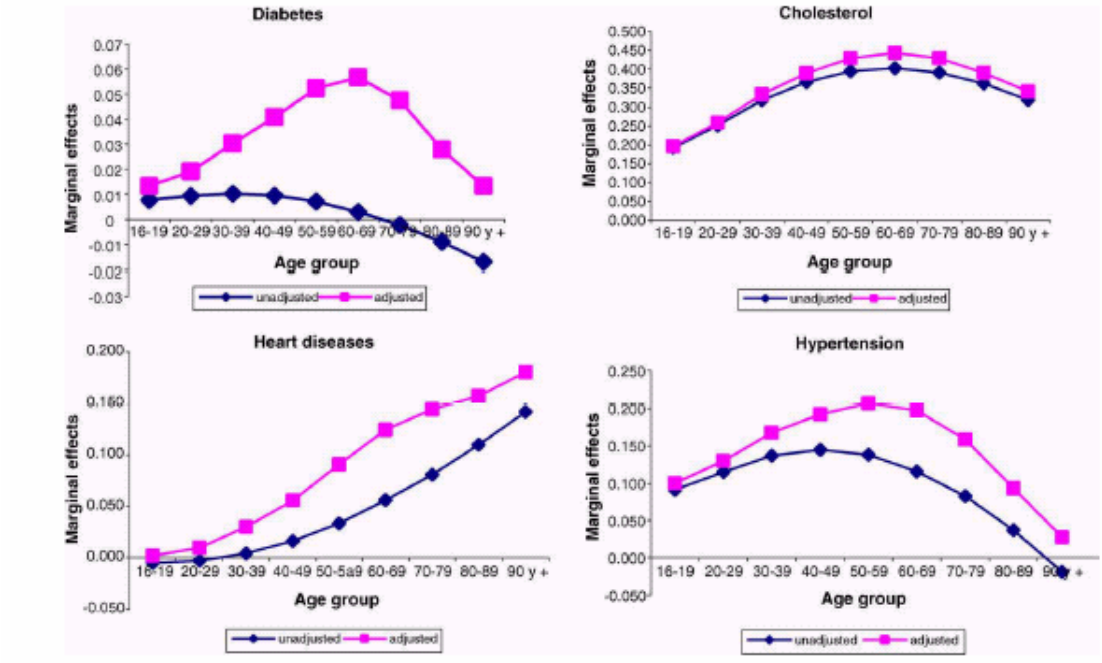
Tabla 8. Indirect costs derived from Obesity linked diseases.Spain 1995.

Obesity Linked Diseases	**Premature mortality (PYLL)**	**Temporal disability**	**Permanent disability**	**Attributable Fraction to Obesity** (%)	**Total attributable cost**
Diabetes Mellitus	33,866	9,817	41,063	57%	33,813
Cardiovascular Diseases - Hypertension - Ischaemic Herat diseases - Stroke	 9,396 350,325 190,507	77,128	325,344	19%	181,013
Rheumatic Diseases - arthrosis of the knee	---	---	180,047	10%	18,005

Source: White book: Social and economical cost of the obesity and derived diseases.1999: 51-66. Data are expresed in million of euros

An empirical study, [37] showed the association between obesity and the cardio vascular diseases incidence, diabetes, hypertension and high cholesterol of a representative sample in the survey of disabilities, impairments and the health status in 1999. In graph 2, the marginal effects of each chronic disease are shown per groups of age for the obese and non-obese population. The prevalence of diabetes without obesity shows a decreasing effect with age, but when the effects of the obesity are incorporated it appears that the diabetes rate rises until the age of 60 and later it decreases. There is an important difference between the obese and the non-obese to suffer from hyper tension and cardiac diseases. For the high cholesterol, the effect of the obesity is less sensitive, being the effect higher towards the age of 60. On the basis of these marginal effects, it is estimated that by 2030, the number of diabetic people in the total population could decrease in 5,3% whilst that for the same period the number of obese diabetic will raise in 40,6%. It is expected a rise in the obese population who suffers from hypertension and high cholesterol in 35% and 38% respectively, whereas the total population projections raises of 12,7% and 21% respectively. It is expected that the obese population who suffering from cardiac diseases will rise in 57% whilst the total population with cardiac diseases will only rise in 51%. In relative terms the total effect of obesity is less notorious for the cardiac disease than for the other examined diseases.

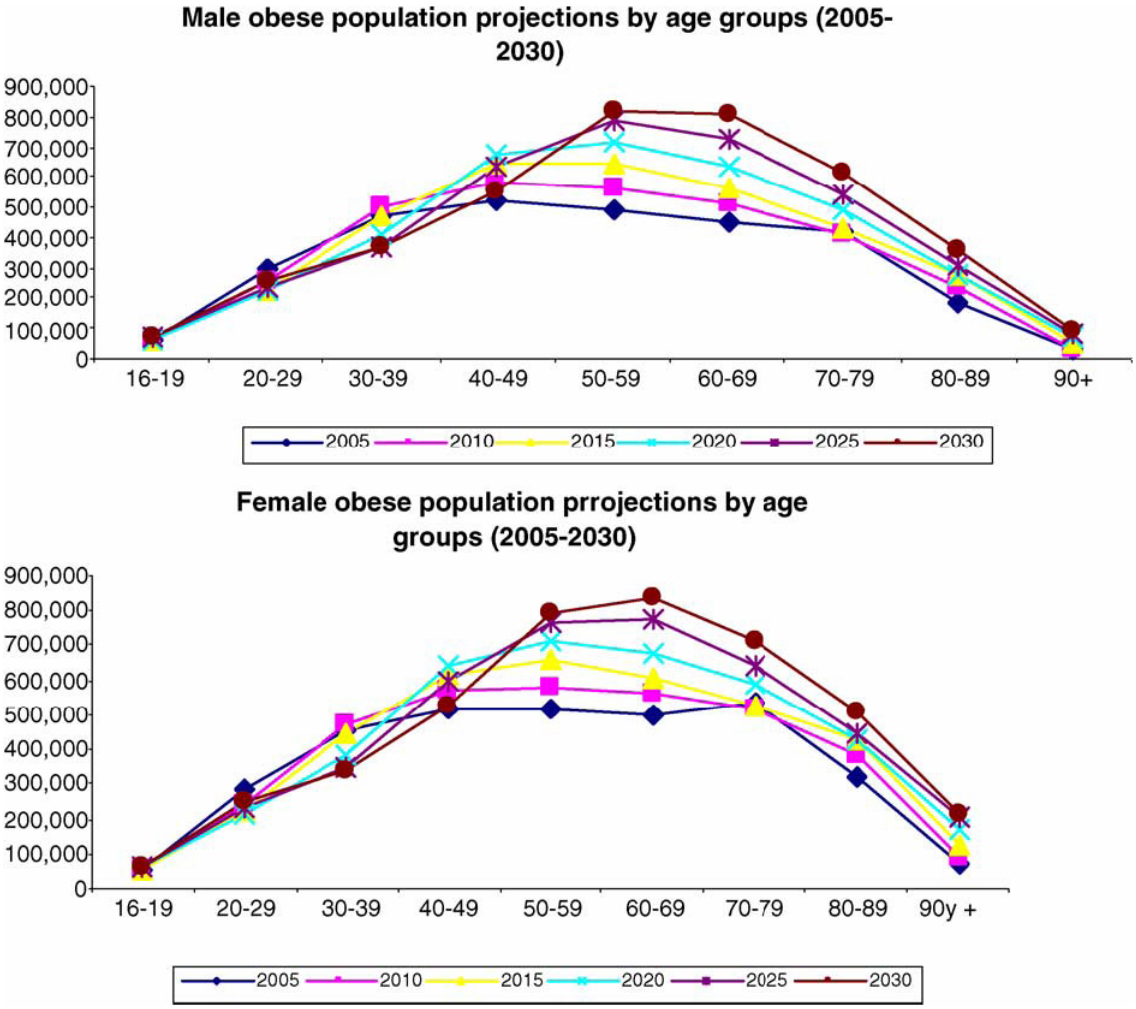
Graph 2. Marginal specific effects by age of chronic diseases, adjusted and non adjusted for obesity in Spain



Source: Costa-Font J, Gil J. *Economics and Human Biology* 2005;3:188-214

The same study[37] shows the projection of the marginal effects of obesity by sex and age, on the last projections of the population for Spain between 2005 – 2003 as presented in graph 3. It is estimated that during the next 25 years, the male obese population will raise in 33% and the female obese population around 37%.

Gráfico 3.Population projections of Obesity in Spain 2005-2030



Source: Costa-Font J, Gil J. *Economics and Human Biology* 2005;3:188-214

2.2. Health Care

The total cost of obesity in Spain for 1995 was approximately 2050 millions of Euros, which represents 6,9% of the total health care expenditure. In table 9 and graph 4 these costs are represented. In regard to the distribution of direct and indirect costs, it must be said that the two third parts of the costs of the obesity are indirect, and its percentage distribution implies a 62,6% for cardio vascular diseases, followed by diabetes, obesity and arthrosis. [35, 38]

Table 9. Direct and Indirect costs of Obesity and Linked Diseases. Spain 1995

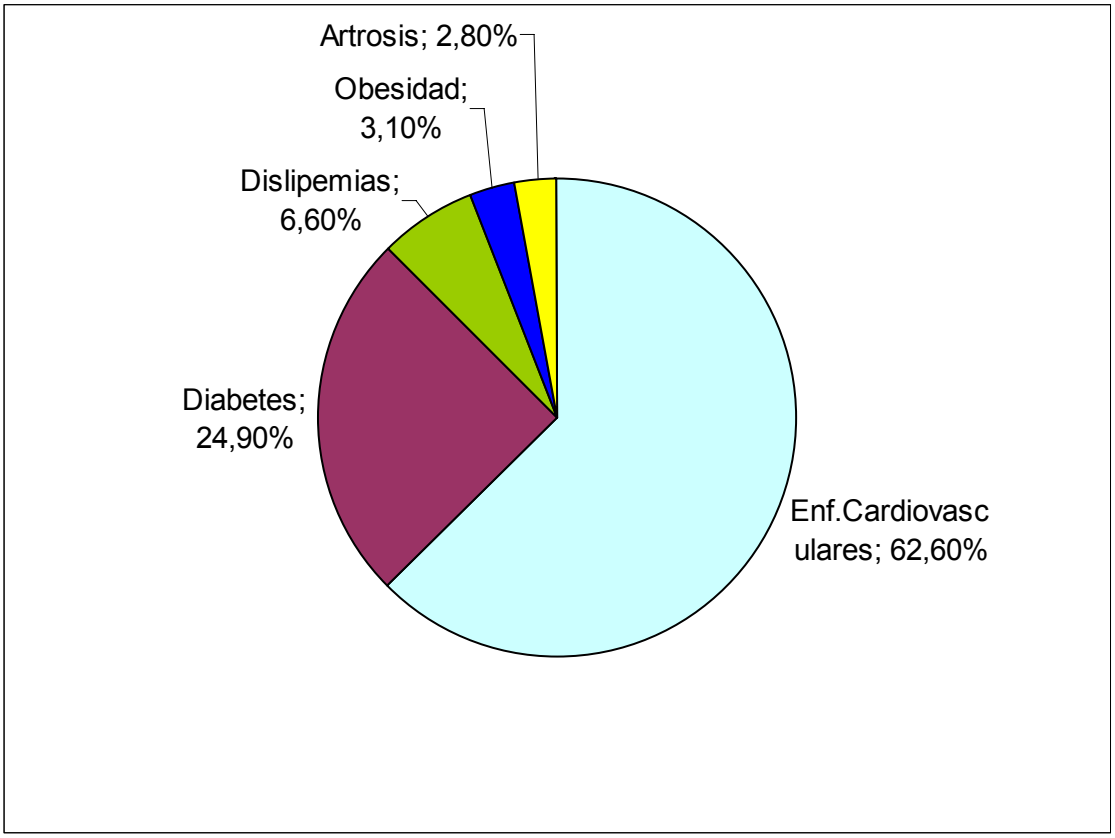
Enfermedades	Direct Costs	Indirect Costs	Total Costs	%
Diabetes Mellitus	184,15	41,37	225,52	9
Cardiovascular Dis	344,97	221,48	566,45	22,6
Dislipemias	59,89	0,00	59,89	2,4
Rheumatic Dis	3,03	22,02	25,06	1
Obesity	28,30	1606,04	1634,34	65
Total	620,35	1890,92	2507,60	100

Source: White book: Social and economical cost of the obesity and derived diseases.1999: 51-66. Data are expressed in million of euros

When examining the relation between BMI (obesity BMI $\geq$ 30 kg/m2) waist measurement (abdominal obesity CC> 102 cm in men and > 88 cm in women) and change of weight with the use of health care services in elderly aged 60 in a study of series between 2001 and 2003. An association between obesity with an increase in use of the health care services both in obese individuals and in non – obese in both sexes was found [39].

In other study[40] of similar objectives, the relation overweight and obesity was examined with the use of the health services in Spanish women from 16 years of age onwards from a representative sample of ENS of 1993. Overweight and obese women showed higher frequencies of visits to the doctor, use of emergency services and had more medication than those with normal weight. The association of overweight and obesity with the use of the health services did not change with age, educational level or presence of a chronic disease. It was concluded that obese and overweight women see their health in worse conditions and make more use of Health Care services.

Gráfico 4.Distribution of Health Services Costs for Obesity in Spain 1995.



White book: Social and economical cost of the obesity and derived diseases.1999: 51-66. Data are expresed in million of euros

Finally , costs associated to obesity treatments are unknown in Spain, they change a lot according to the option chosen including “miraculous drugs”. Thus, in the case of the current pharmacological treatments, the annual cost ranges between 672 to 773 €. These figures are exclusively due to the costs of treatment and its variability depends on the doses and type used.[41 42]

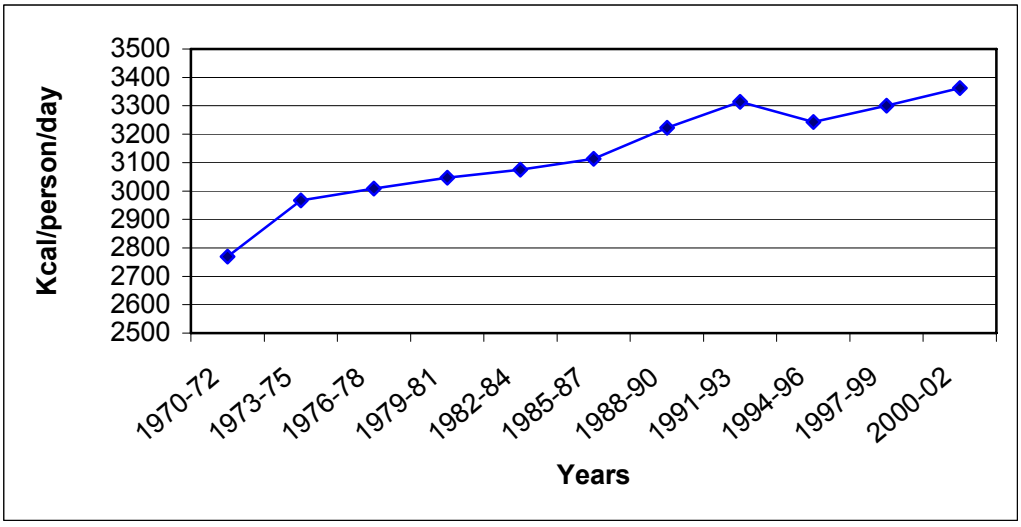
SECTION 3: TRENDS IN FOOD CONSUMPTION AND PHYSICAL ACTIVITY

3.3. Trends of the availability of food and consumption

In this chapter, firstly, it is presented an overall view of the evolution of food consumption from the point of view of availability of food, taken from the FAO's balance sheets, and related to productive structures. Then, the food consumption and its tendency is also analyzed in relation to the expenditure of family budgets, taken from various published studies. These are basic reference for the family consumption from an economic and social point of view.

In graph 5, the evolution of consumption of food energy per person is represented, obtained from the FAO's balance sheet between 1970 and 2002. This data refers to food availability related to the production, import and export regarding the nutritional terms as energy availability in kcal/per capita/year. The balance sheets also report the consumption per capital/day in kilograms of proteins and fats. (Graph 6). From this data, the consumption of carbohydrates was calculated (CHO) as the percentage contribution of these macronutrients to the total caloric intake in the Spanish diet during the same period taking an average every 3 years (Table 10).

Graph 5. Evolution of food energy supply per per-cápita in Spain, 1970-2002.

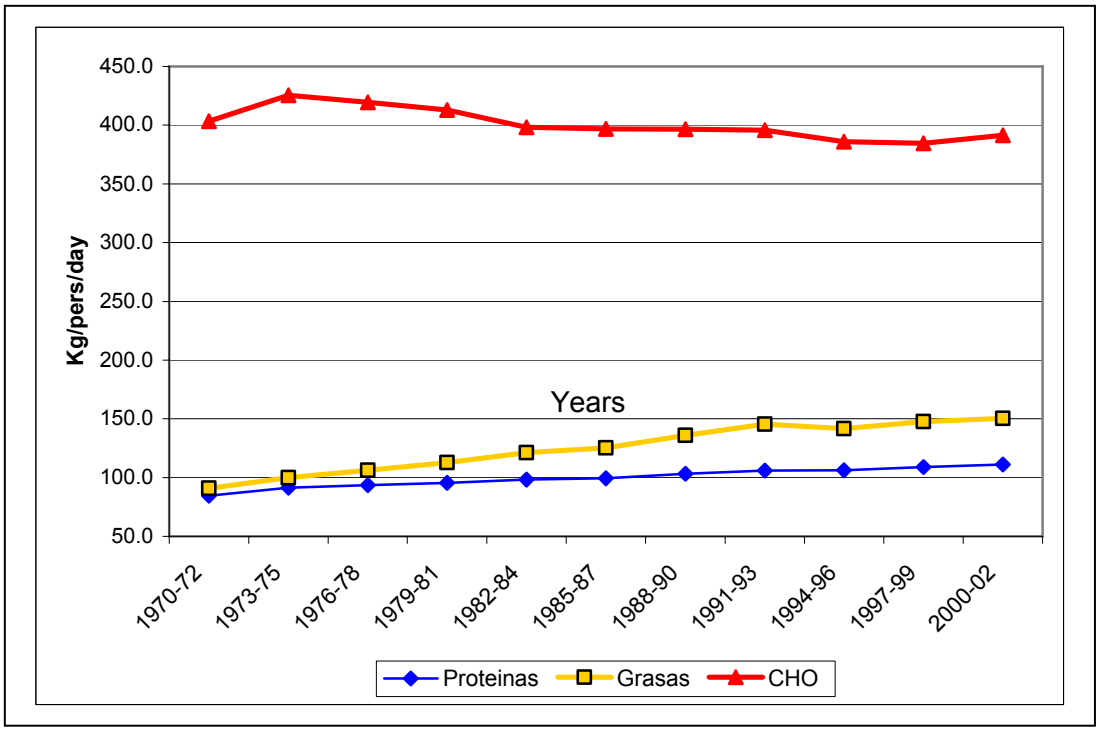


Source: FAO's balance sheet, average of 3 years

The results show how that the caloric consumption has been rising from 2770 Kcal/percápita/day in 1970 to 3363 Kcal/percápita/day by 2002. The maximum values reached 3314 Kcal/percápita/day in the period 1991-93 in the three years 2000-02. The energy consumption has basically risen due to the caloric

contribution of fats, and in lesser degree to the proteins (Graph 6). According to the nutritional objectives proposed by the Spanish Society for Community Nutrition[43] it is analyzed that from the second part of the eighties, the energy provided by the fats raised above their nutritional objectives, reaching 40% of the total caloric value from the nineties. The proteins roughly raised, reaching the maximum values since 1999.

Graph 6. Evolution of the supply of proteins, fats and sugar per-cápita in Spain 1970-2002.



Source: FAO's balance sheet, average of 3 years

Table 10. Percentag e contribution of the macronutrients to the total caloric intake in the Spanish diet since 1970-2002. In relation t o the Nutrit ional Objectiv es established b y the Spanis Societ y o f Community Nutrition

	Proteins %	Fats %	Sugars o CHO %
Nutritional Objectives*	20-10	30-35	50-55
1970-72	12,2	29,5	58,3
1973-75	12,3	30,3	57,4
1976-78	12,4	31,8	55,8
1979-81	12,5	33,3	54,2
1982-84	12,8	35,4	51,8
1985-87	12,8	36,2	51,0
1988-90	12,8	38,0	49,2
1991-93	12,8	39,5	47,8
1994-96	13,1	39,3	47,6
1997-99	13,2	40,2	46,6
2000-02	13,2	40,2	46,5

Source: FAO's balance sheet, average of 3 years
*Consenso de la Sociedad Española de Nutrición Comunitaria

The evolution of the rise in the energy consumption and its caloric distribution is in accordance with the scientific literature reports. A study on the food and nutrients consumption in Spain in the 1940-1988 period[44] showed that the total caloric intake raised through the period, especially since 1960. There was a raise in the caloric contribution of lipids (30% in 1960/68 to 42% in 1980/88), whilst the carbohydrates dropped (58% in 1960/68 to 45% in 1980/88). The caloric contribution of proteins remained by 13% both in 1960/68 and in 1980/88. The authors attributed these changes to an important raise in the consumption of meat, eggs, milk and dairy products, although there is a high consumption of fruit, vegetables, fish, olive oil and seeds.

Data from the Nutritional Surveys at individual levels of the CCAA have allowed to know the consumption of food, showing similar trend[45, 46, 47, 48, 43] Thus, Cataluña, Madrid, Valencian Community and Andalucía show similarities in the caloric distribution of the diet, with a trend towards the reduction in approximate 40% of the consumption of carbon hydrates, high in lipids on the 40% and 17% proteins.

Conversely, the Canaries Islands show a different trend in so far as its population show a low consumption of food energy, specifically the energy from lipids (33,4%) is low, as well as the consumption of fruits and vegetables is the lowest in Spain.

The profile in the consumption of the different types of fat in Spain show approximately 50% of the total coming from monounsaturated acids basically present in the olive oil; other high proportion of saturated fat acids by the consumption of meat, diary products, pastries, and fat additives; and a lesser part come from polyunsaturated fat acids by the low consumption of oil seeds.

Spain is recognized by a favourable consumption of olive oil, responsible for the high percentage of monounsaturated consumption, and a high protein intake, similar to the Western countries. [43, 49] By the same token, many epidemiologic studies show high energy consumption in the infant population come from fats similar to the adult population. [50, 51] According to the enKid study, the infant and youth in Spain is the group of population with a higher risk of inadequate intake and with a higher intake of saturated fat acids. It concludes that children and youth who contributed with a higher energy proportion from the lipids (>40% kcal), showed high prevalence of obesity in relation to those with lowest intakes. [34, 43]

The investigation on family consumption started in the seventies, though its development was in the mid eighties. The total households expenses in food has fallen remarkably from 50% in 1958 to 32,1% in 1980, 29% in 1990 and 20% in 2001 according to the Family Budget Continuous Survey (ECPF in Spanish), and representing a medium expenditure per household in food of 4.169,5 € (euros) in 2001. [52, 53] Table 11 shows such evolution distributed by the autonomous communities (CCAA), whose behaviour is the same than in the national levels showing a reduction of the budget of expenses in food. [53]

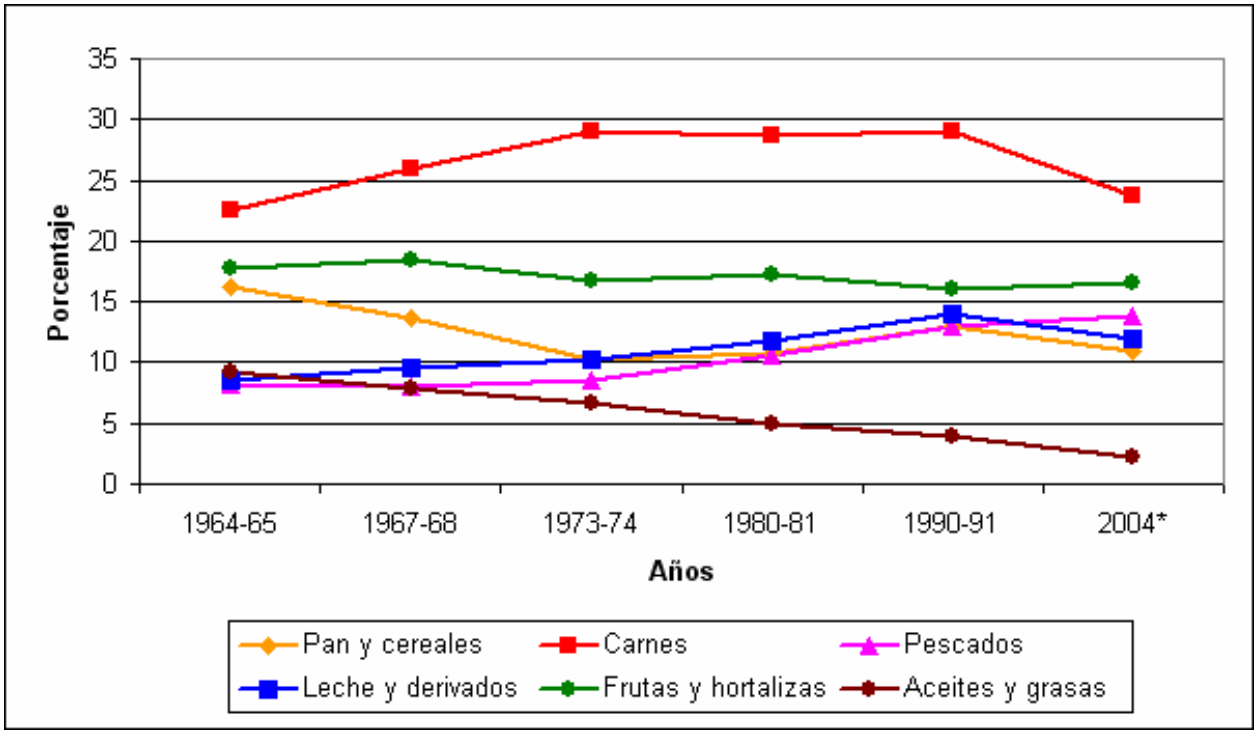
Table 11. Evolution of Expenses in Food (in % of the total expenditure) by Autonomous Communities (CCAA) of Spain

CCAA 1980	-81	2001
Aragón	31,5	20,9
Andalucía	34,1	20,8
Asturias	32,0	20,0
Baleares	29,1	17,0
Canarias	33,0	20,5
Cantabria	29,8	20,7
Castilla y León	33,3	21,5
Castilla-La Mancha	37,2	22,3
Cataluña	31,7	19,6
C. Valenciana	30,3	19,3
Extremadura	36,7	26,1
Galicia	37,2	23,9
Madrid	27,6	16,8
Murcia	34,7	24,3
Navarra	20,1	18,2
País Vasco	28,8	17,9
La Rioja	33,5	20,4
Total	32,1	20,0

Source: Sadei. Government report of the Principality of Asturias, 2004. Data of INE: EPF 10980-81 and ECPF 2001 (res. Anuales)

Regarding the distribution by food groups (Grafth 7) there is a progressive raise of the proportion of the expenses on meat, dairy products and fish of 28%, 64% and 58%, respectively between 1965 and 1990. There has been a reduction of the proportion for bread and cereals (20%), fruits and vegetables (10%), and especially of oils and fats which have been reduced in more than half in the researched period. The expenses structure in food has shifted from mainly the consumption of cereals, fruits and eggs and a minor consumption of meat and diary products, to a diet in which the proportion of expenditures in cereals, fruits and vegetables lowered, whereas the one in meat, dairy products and fish has remarkably increased. These changes mainly happened in the 60-70 decade, when the expense structure in food was stabilized. [52] When exploring the data of National Institute for Statistics of the Familiar Budget Survey (FBS) corresponding to 2004 for these same groups of food, it can be seen that the trend in the per cápita expenditure is lower in the group of bread and cereals, meat, milk and dairy products, and oils, whereas the consumption of fish, fruits and vegetables remain stable.

Graph 7. Evolution of the percentage structure of the average annual food expenditure per cápita per food groups (%), 1964-1991



Fuente: Estudios Regionales 1998; (50):111-129. INE: Encuesta de Presupuestos Familiares
* Datos del INE: Encuesta de Presupuestos Familiares 2004.

These changes are attributable to some factors. Among them, economic ones and the modernization of the family patterns of consumption, as well as the food transformation processes in the domestic sphere, the incorporation of techniques that simplify cooking, changes of the buying habits of consumers

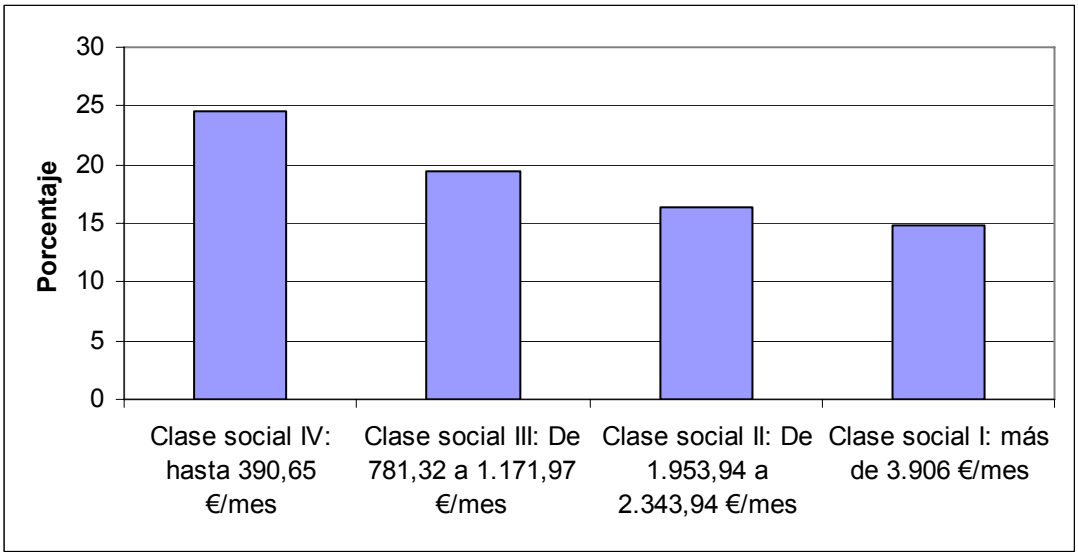
who have a diversification of shopping places and the raise of food and consumption outside home. Another factor is the incorporation of women in the labour market, the urbanization process, the introduction and development of new systems of distribution, changes in the demographic structure (aging of the population) and the growing preoccupation by nutrition and health. All these factors not only generate changes in the food structure but also determine patterns of different consumption. [52, 53]

There are differences in the behaviour of the rural consumers (10.000 inhabitants) and urban ones (10.000 a 500.000 inhabitants), when buying food.[54] In general,

urban populations consume higher quantities of cow meat, fresh fish, dairy products, fruits and fresh vegetables and semi manufactured products, whilst the rural populations consume more pork, sheep and goat, fresh milk, bread, sugar and vegetables. The studies show that the answer of the demand of food products analyzed before the changes in the prices is very rigid and this rigidness rises with the size of the neighbourhood. It can be said that economic development level is a main condition of the food demand. From this point of view the stratification considered, show certain limitations in so far as it is easier to find similar behaviours among the consumers of the same social class, despite the fact they live in neighbourhoods of different size, than among the consumers of different social class who live in the same neighbourhood. In any case it can be said that, in smaller neighbourhoods, a raise of the total expenditure in food determines a major raise in the demand of meat and fish to the detriment of bread and cereals. On the contrary, in bigger neighbourhoods, fruit, vegetables and diary products experience a lesser development. Furthermore, the results obtained show that consumer's behaviour depends on the size of his neighbourhood. This differencial behaviour is due to the existence of relative prices meaningfully different in the different neighbourhoods and in a lesser extent, to the existent level of consumption. From this point of view, differences have been found only when comparing the smaller neighbourhoods (rural nucleus) before the others. [52, 54, 55]

Graph 8 shows families expenses on food consumption based on their level of incomes. Selecting four out of the eight established by ECPF, differentiated behaviours can be seen. Thus, the food expenditure is reduced whenever the household income raises: in the higher income class, such expense represents 14,8% of the budget whilst in the households with lower incomes, the effort is greater. It represents nearly a quarter of the total family expenditure (24,5%). [53]

Graph 8. Percentage of familiar expenditure in food according to income levels in Spain 2001



Source: Sadei. Government Report of the Principality of Asturias, 2004. Data of INE: Archives of microdata of ECPF 2001

Table 12, shows a raise in the total expenditure in food, as well as the expenditure out of home, shifting from 21,6% to 27,5% between 1987 to 2004.[56] The highest expenditure occurred between 1997 to 2000. This finding has been confirmed in other studies[10, 15] where between 1981 and 2001 it was found that the percentage of such expenditure changed from 16% to 25%. Furthermore, there is a reduction in the number of meals at the households during the same period and a net increase in the number of restaurants and its value of production in the last years. The authors argue that in the case of Spain, doing a main meal, or any of the habitual meals out, is not associated to overweight and obesity.

Table 12. Evolution of the medium annual expenditure per cápita in food consumed, and percentage (%) of eating out 1987-2004

Year	Total expenditure of food* Thousands of million of constant €	Expenditure out of home* * Thousands of million of constant €	% of eating out.
1987	35.26	7.63	21.6
1988	36.57	8,2	22.4
1989	39.34	9.93	23.8
1990	41.88	10.7	25.5
1991	44.73	11.69	26.1
1992	61.44	16.7	24.9
1993	51.85	14.66	23.7
1994	53.09	15.02	24.0
1995	56.72	15.98	25.9
1996	48.68	12.95	26.6
1997	50.14	13.52	27.0
1998	51.85	14.66	28.3
1999	53.06	15.04	28.3
2000	56.72	15.98	28.2
2001	61.44	16.7	27.2
2002	66.24	17.73	26.3
2003	69.41	18.69	27.0
2004	74.75	20.52	27.5

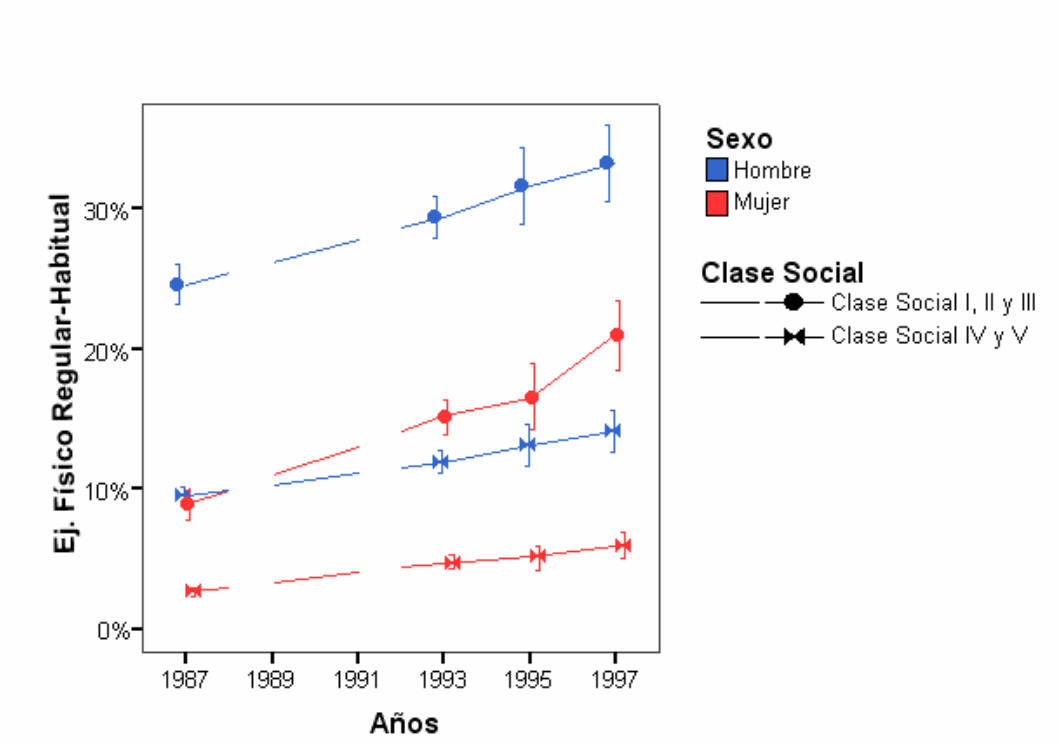
Source: Ministry of Agriculture, Fishing and Food. Annual series.
Evolution and distribution of the expense between 1987 - 2004.
*Total value of parchases in food (Homes, hostels, restaurants and insitutions.
** Value of purchases in food (hostels, restaurants and institutions)

3.4. Physical Activity

Graph 9, shows the trend of the regular physical exercise using as sources of data the National Health Surveys of Spain performed from 1987 to 2001 by sex and social class. The self referred data of the ENS and the adult population above 16

shows that the physical exercise in the leisure time has raised in the period analyzed both in men and in women in all the social classes. However, there are some differences between men and women according to their social class, being the highest classes (I, II and III) for both sexes those who do more physical activity in their leisure time.

Graph 9. Prevalence of regular physical exercise in the leisure time in the Spanish population according to sex and social class 1987 to 1997.



Fuente: Cristina Montagud. Área de Medicina Preventiva y Salud Pública, Universidad de Alicante. Encuestas Nacionales de Salud de España

This data coincide with other studies that analyze the prevalence of sedentary behaviours taken by the ENS, [10, 15] where the percentage of the population who does not do any exercise during its leisure time, dropped in both sexes between 1987 to 2001, shifting from 70,7% to 52,2% and from 53,7 to 41,2% in women and men respectively. As indirect indicator of the population that does some kind of exercise, there was a raise in the number of facilities and sports centres and federal licenses. In relation to the physical activity at work, the energy waste was reduced and the percentage of sedentary workers raised between 1987 and 1997.

However, the association between the physical activity developed during working hours and the obesity is inconsistent. Probably, the physical activity in the leisure time and during the trips to work are affecting the raise of the obesity prevalence, more than the labour activity itself. [57]

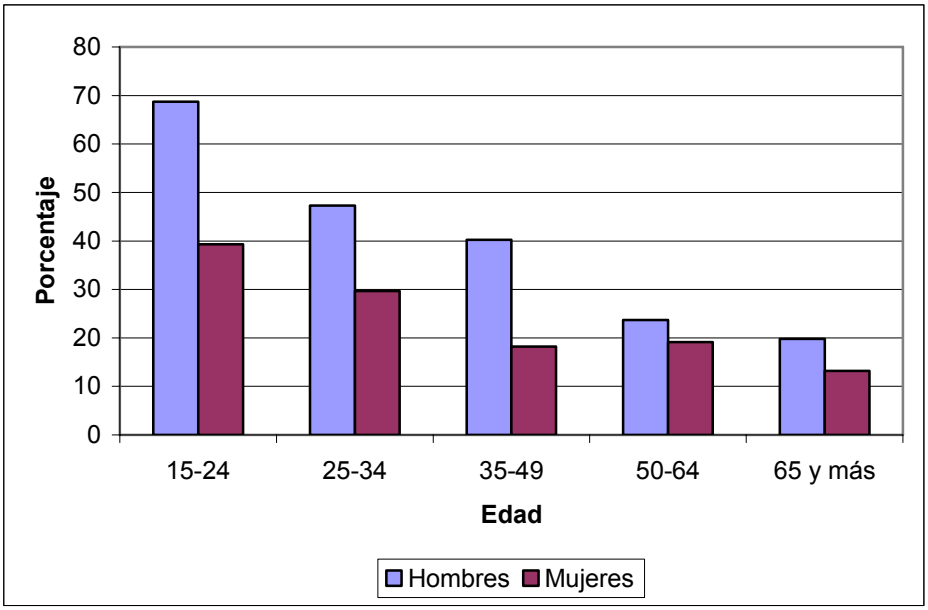
From the Health Survey of Barcelona in 1992, in population above 14,[58] variables of social structure and behaviour related to the health as a regular physical activity are analyzed. The physical activity was classified in: “intensive” which requires an important physical effort, “moderate” referred to daily walks, “light” referred to most of the day staying resting and “any” referred to resting most of the day. It was found that light physical activity or any at all, lowers in men in the lower social classes. 80,7% of the population above 14 performed less than three times of a physical moderate or intense activity a week in their

leisure time, and 20% did not perform any type of exercise. Inactivity was higher in women, raised in a significant way with the age and in lower socio economic levels. Less than 5% of women and men of class I stated that they usually do an intense physical activity, opposite to 11,5% of men and 8,5% of women of social class V. Furthermore, the physical activity performed during the leisure time is not one of the most important activities that Spanish people do in their leisure time, despite they considering that the physical activity is important for good health and leisure, and because they consider that is an easy activity.

Results from Girona show that the physical activity during the leisure time raised with the age in men ($P<0.002$). However, in women there were not meaningful differences in the age groups. [59]In the Canaries Islands, there is a higher prevalence of sedentary lives of women in the urban areas compared to the rural areas.[60]

The results of the Nutrition and Health Survey of the Community Valenciana of 1994 [48] show that a third part of the adult population (33,2%) stated that they practise some sport or physical exercise as a habit in the last year. This percentage of 43,5% belong to men and 24,4% to women (p<0,001). As shown in graph 10, men practise more physical exercise than women in all the age groups. The older the person, the lower the physical activity. Amongst the persons that declared they practice sports, there was a media of 6,73 (SD=6,67) hours/week (h/w), being 7,6 (7,44) h/w for men and 5,42 (5,06) for women, being statistically significant (p<0,001).

Graph 10. Common practise of physical exercise according to the age and sex in the Valencian Community, Spain 1994.

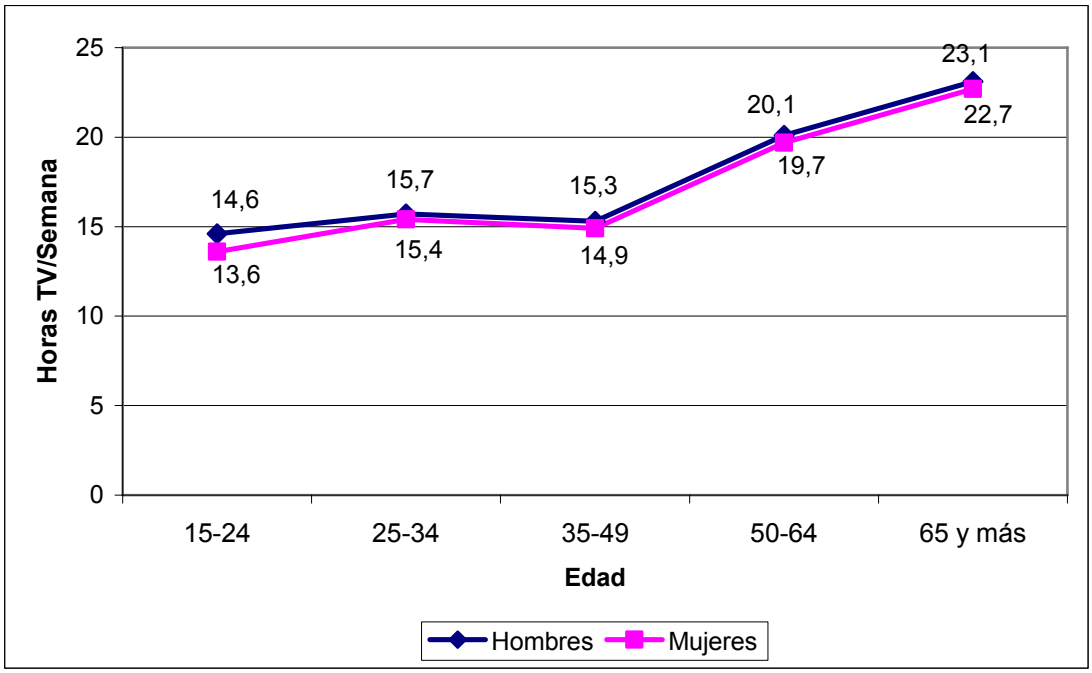


Source: Vioque-López J, Quiles i Izquierdo J. Encuesta de nutrición y salud de la Comunidad Valenciana. Universidad Miguel Hernández. Alicante; 2003.

The results of the survey also describe the physical activity in leisure time. For 59,1% the principal daily activity in the leisure time was reading, watch TV or go to movies, being higher in women (65%) than in men (52,1%). 32% stated they do activities of light effort, walk and give walks from time to time.

In relation to the weekly hours spent watching TV, the average was 17,1% h/w representing this activity 12.2% of the leisure time activities. There were no differences by sex but by age groups, the number of hours watching TV increases with age as is shown in graph 11.

Graph 11. Hours watching TV per week, by age and sex in the Valencian Community. Spain 1994.



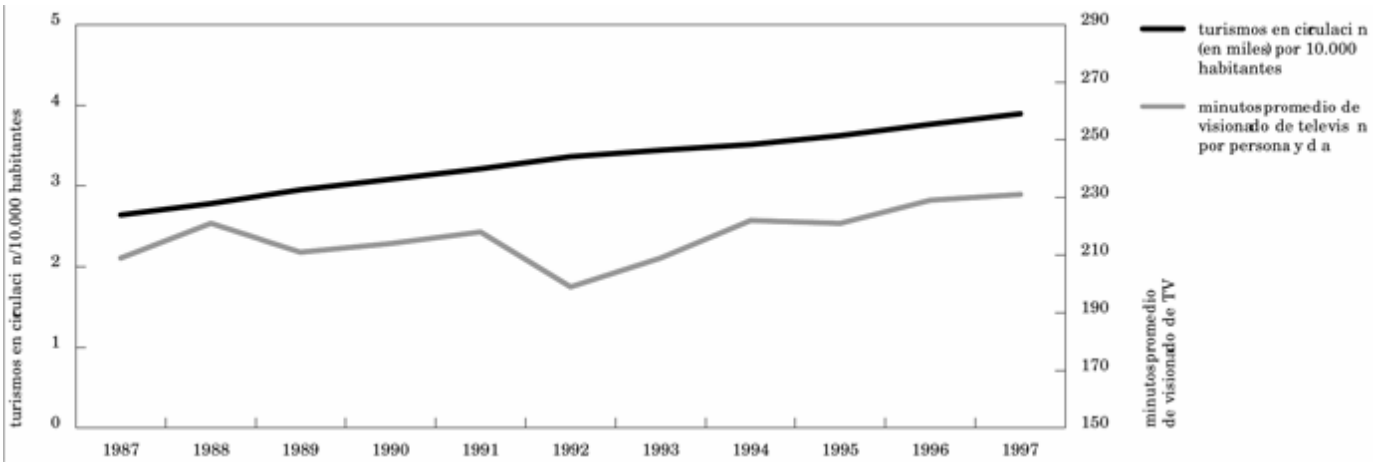
Source: Vioque-López J, Quiles i Izquierdo J. Encuesta de nutrición y salud de la Comunidad Valenciana. Universidad Miguel Hernández. Alicante; 2003.

There was a positive and independent association among the number of hours watching TV and the risk to be obese, in so far as the obese adults of the Valencian Community spend more time watching TV than the non-obese persons and spend less hours of sleep. Furthermore, the physical activity at work and the duration of sleep showed a reverse association with the risk of obesity. [61]

Finally in a study of the temporal trend in Spain between 1987 and 1997, some indirect indicators of a physical inactivity regarding the number of tourism vehicles functioning by 10.000 inhabitants were related. The data was gathered by the statistical annual reports of the National Statistical Institute (INE, 1994ª and 2001).[10] Graph 12 shows that the number of vehicles raised from 2640 per 10.000 inhabitants in 1987, 3890 in 1997 and 4600 in 2002, which can express a higher sedentary trend. Also the degree of Spanish households equipment

changed extraordinarily between 1988 and 2004. The percentage of households with two or more TV sets shifted from 21,6 to 57,8% between two years, which supposes a percentage of change of 168%. A similar raise in relative terms occurred in the percentage of households with two or more cars (196%) or with dish washer (200%). The percentage of households with personal computers and TV remote control, shifted from 5,1 to 21,9% (percentage of change of 329%) and 12,8 to 80% (percentage of change of 525%) respectively between 1988 and 1997.

Graph 12. Tourist vehicles (in thousan ds) driving in Spain per 10.000 inhabitants and average minutes of watching TV per person and day , 1998-1997.



Source: Gutierrez-Fisac JL, Regidor E, Lopez-García E, *et al*. *Cad. Saúde Pública* 2003, 19 (suppl.1):101-110.

SECTION 4: POLICY-MAKING INSTITUTIONAL STRUCTURES

Introduction. Political Context of Spanish Institutions

During the 20th century, the Spanish population, like that of many other countries in the south and east of Europe, suffered from dictatorship. Following a military coup in 1936 which resulted in a cruel civil war that lasted for three years, General Francisco Franco became dictator of Spain. His authoritarian regime endured until his natural death in 1975.During the late 1970s, Spain was undergoing a process of democratic transition which resulted in far-reaching political changes. The country was moving from a dictatorship, which had lasted for 40 years, to become a modern democracy. It also changed from being a very centralised nation state to become a decentralised one, with governance devolved to 17 autonomous communities.

Spain thus emerged from a situation of international isolation to become a full member of the European Union and of other transnational bodies.These important moves have had an impact in many areas of Spanish society, including social, and hence health care and public health policy.

Arguably the most important achievement in Spanish social policy in the last 25 years has been the development of a welfare state which funded at an acceptable level by contemporary European standards.

Health Policy in a quasi-federal country

In spite of this the Kingdom of Spain as a whole hás never employed health targets in formulating its health policy and in fact has never produced a nationwide health strategy. This is in contradiction to the Spanish government agreements with WHO Euro in 1984, entered into as a member state, and to the domestic mandate of the Spanish General Health Law passed in 1986.

Following the first democratic elections there were four years of conservative governments (Union de Centro Democratico) from 1978 to 1982. In that period the political agenda of the country was overwhelmingly dominated by the need to consolidate the young Spanish democracy and further to develop the process of devolution to the autonomous communities. The major issue in health policy during this period was the reconstitution of the Spanish Ministry of Health, abolished in 1939.This ministry brought all the administrative bodies with competencies in health matters under the same political authority and administrative umbrella and began the process of decentralising decision making to the autonomous communities. In 1982 the Spanish Labour Party (PSOE) won the elections. Its electoral programme included the change of the Spanish social security system (created in 1953) into a national health service.

In the course of the 1980s, Spain, under its Labour governments and like a number of other southern Europe countries, moved from a social security

system towards the creation of a true national health service. The creation of an NHS was at the centre of the health policy debate during the 1980s and was the objective of the Spanish General Health Law (SGHL) passed in 1986.

As far as health targeting was concerned, the SGHL established the principles for this in a very decentralised way. Each autonomous community was given the responsibility of developing its own health plan, leaving the Ministry of Health in Madrid with the mandate for giving coherence to a nationwide "integrated health plan" for Spain. The Spanish National Health Service is perhaps the most decentralised system in Europe. Its shape has been strongly determined by the organisation of Spain as a quasi-federal state. All areas of public governance were fundamentally redefined, though the extent of this depended on the level of decentralisation of competencies in the various autonomous communities. All the 17 Spanish autonomous communities were given a measure of responsibility for public health since the early 80s and by the year 2004 were also given full responsibility for the provision of healthcare services.

The least expensive part of the health service – namely public health – was the first to be devolved.This happened in the early 1980s (in Catalonia, in 1979). Those autonomous communities which had had most competencies devolved to their governments (Catalonia, Navarra and the Basque Country) began the process of decentralising their health services. This decentralisation also affected the development of health targeting, which thus became primarily a task for thegovernments of Spanish autonomous communities.

Food and Nutrition Institutions

The first government body concerned with nutrition was created in 1982 as the Interdepartmental Commission on Food regulations (Comisión Interministerial de Ordenación Alimentaria). It was a coordinating commission with all the departments of the Spanish government with competences in food. In this commission the main partners are the Departments of Health and Agriculture (having the presidency Health, and being the vice president the Chief Medical Officer for Spain)), but also with representations from the departments of Economy, Transport, Industry and Tourism. This Commission have all the regulatory, informative and planning competences concerning Food is Spain, it is also responsible of the international relationships concerning food regulations (Codex, EU, FAO and WHO in food related health problems.

The process of devolution above mentioned also affects not just to Public Health and Health Care but also to other areas of goverment with impact in Obesity like Agriculture, Transport, Sports or Urbanism. A comprehensive and detailed view of the institutions affecting obesity in Spain is hard to build, as many areas of government affect obesity and and government in Spain is very decentralized. Norwith standing a new institution was created in 2003 which has responsibilities in nutrition and hence in Obesity.

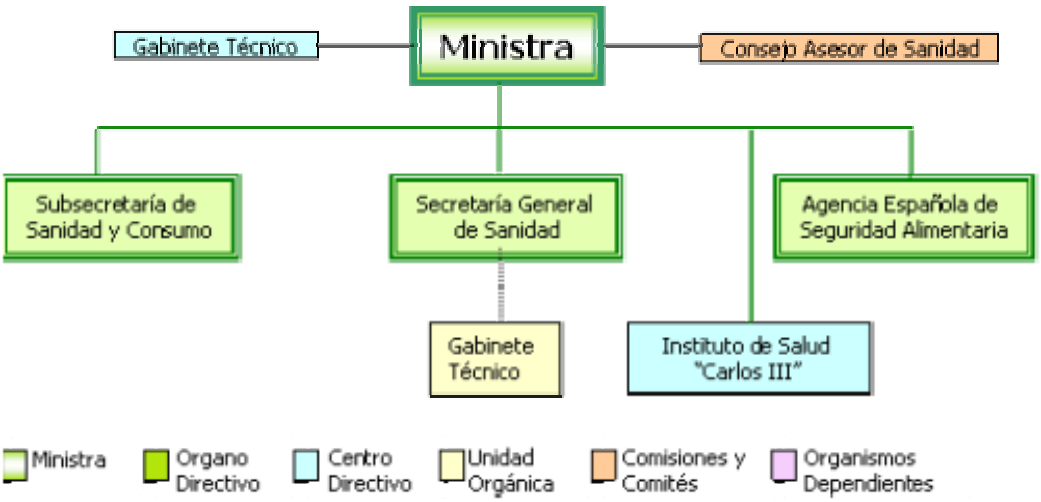
The Spanish Agency for Food Security, (AESA in Spanish) is an institution of

the Spanish Ministry of Health situated at the top level of the managerial structure depending directly form the Minister of Health. AESA recognise as their mission to “guarantee the highest level of food security and to promote the health of the citizens”. Trough the following lines of action:
-Risk reduction concerning food borne or food related diseases
-Guarantee of eficacy of food control systems
-Promotion of a varied and balanced diet, able to promote a better public health favouring accesibility and information on food

Since the creation of AESA its president is also the president of the Interdepartmental Commission on Food regulations, AESA have also a commission with the participation of all the Directors of Public Health of the Autonomous Communities, a scientific advisory committee, and have recently developed a technical National Food Center devoted just to laboratory techniques.

AESA has a high profile and excellent reputation in Spain but sadly still have not fully develop its competences in nutrition and hence in the prevention of obesity, with the exception of the NAOS strategy (see next chapter for more details on this), still is a body mainly focused is food safety with high visibility in “food crisis” by biological or chemical contaminations of foodstuff but with low profile in the attempts to develop policies to ameliorate the health effects of the growing epidemic of obesity which is currently affecting Spain.

Organizational chart of the Spanish Do H, showing the high profile of the Spanish Agency for Food Security.2005



SECTION 5: POLICY DEBATES AND INITIATIVES

5.1. Obesity Policy in Spain.

The Ministry of Health and Consumption of Spain sees the strategy for nutrition, physical activity and prevention of obesity (NAOS in Spanish) as the policy initiative to combat obesity [62]. The main objective is to improve food habits, promote a healthy nutrition and foment the regular practise of physical activity among citizens, particularly children and the youth. Some of the measures foreseen by the NAOS strategy are the progressive reduction of the percentage of fat, sodium and salts in food, the prohibition to install vendor machines in places of easy access for children, and a self-regulating code for the publicity of food and drinks. The tools on which the strategy is based, are recommendations, voluntary agreements, the self regulation and in some cases law projects.

This initiative is based on the world strategy proposed by the WHO on food regime, physical and health activity, presented in the 57 World Health meeting in 2004. The strategy approaches the main factors responsible for the growing morbidity charge of non transmissible diseases (NTD) that represents approximately 60% of the world death and almost half of the world morbidity burden (47%). The strategy recommends an approach orientated towards prevention where the need for developing national strategies stands out. These strategies must be coherent, multi-sector, sustainable, and for the long turn with the purpose to make of healthier options the favourite ones at individual and community levels.[63]

Hence, the Ministry of Health and Consumption defines these orientations in the NAOS strategy where the problem of obesity in Spain is considered as a multi-sectoral one, and inviting a wide range of stakeholders to participate in its design. Coordinated by the Spain agency of food security and the Public Health General Directorate as well as representatives of the different sectors a wide consultative process took part for a period of 12 months. Among them were represented the regional and national governments (i.e.: Ministry of Education and Science, Ministry of Agriculture, Fishing and Food, autonomous communities and councils), the private sector (i.e. food, leisure, catering and restaurants), freelance experts, consumers associations, public health associations, and the media.[64]

NAOS is a mutli-sectoral and Inter.-sectoral strategy of public health and health promotion that frames the obesity problem as interdisciplinary within an international, regional and local context. The novel strategy is the co-ordination and participation of all the involved actors in the prevention of obesity, including the civil society, the private sector and the media.

This political initiative supports a document entitled: Strategy for nutrition, physical activity and prevention of obesity. NAOS: revert the trend of obesity which involves the following elements:[62]

- Goals and objectives
- Scope of intervention: family and community, school, enterprise and Public health. In each scene the objectives are specified, as well as the actors and each one of the intervention actions proposed. (Table 13)
- Evaluation and follow up: proposes the creation of an observatory of obesity that quantifies and periodically analyzes the prevalence of obesity and its impact.

Table 13. Scope of Intervention of the NAOS strategy, Spain

Scope Intervention	Objective Interv	ention aspects	Actions
Family and community	Raise awareness and inform the population on the positive impact for its health of a balanced diet and the regular practice of a physical activity, improving the available information on healthy lifestyle habits.	- Formation and dissemination Nutritional recommendations - Promotion of physical activities.	- Information campaigns - Co-ordination with leisure businesses, manufacturers and recommendations on adevertisers of toys. - Conformation of a work group at the regional and municipal levels to promote the physical activity.
School	Promote food healthy habits and regular practice of sports in the schools.	-Education - School kitchens -Food and drinks vendor machines.	- Curricular modification - Extra school activities in diet techniques. - Instruction to teachers on food and nutrition. - Agreements with businesses of chain restaurants to modify the selling of food. - Publication of practical guides for a balanced food dissemination in the schools. -Vendor machines placements -Publicity administration
Business	Prevent the obesity and overweight from the food industries, hotel businesses and restaurant chains, developing and promoting healthier products. Reduction of SALT in bakery products to reduce its daily intake in the population.	- Food and drinks industry - Commercial distribution businesses. - Hotels and restaurants. - Organisation of bakeries	- Co-ordination with businesses for the support of the strategy - Nutritional information - Composition of food - Food marketing and advertising -Agreement with national associations of national distribution of food for the promotion of commercial policies in the products. -Agreement with the main restaurant chains for the modification of food contents

			in the preparations, as well as the servings. -Agreement with the bakery sector to reduce the quantity of sodium in the preparation of bread.
Sanitation	Systematically diagnose the overweight and the obesity through the different actions of promotion and protection.	-Nutritional Medical advise on patients -Promotion of healthy habits.	-Counselling -Periodical campaigns of early detection of overweight and obesity. -Promote breast feeding - Surveillance mainly to children

Fuente: Ministerio de Sanidad y Consumo. Estrategia para la nutrición, actividad física y prevención de la obesidad (NAOS) 2004

Some autonomous communities as Cataluña include specific objectives on food and physical activity in their Health Plans which have been the basis for norms and the integration of preventive activities in this field of health primary assistance. The Community of Madrid since 2005 has the "Integral Food and Nutrition Plan" than involves three main lines of action: food security, healthy food and quality food. Finally, the Community of Andalucía has recently launched the "Plan for the promotion of the physical activity and the balance food 2004-2008". This plan aims to promote physical activity and balance food to prevent the disease and disability and improve quality of life. To achieve it, the following operational objectives have been designed in their scopes of intervention: general population, sanitary services, education and enterprises. Furthermore, the necessary action strategies have been defined to reach the set goals and the indicators to evaluate the achievement of them[15.] Other similar political initiatives have been identified in the Health Plan for Asturias 2004-2007: health as horizon which contemplates 4 objectives with their corresponding strategic areas and these in turn with their related lines of action. [65]

5.2. Visibility of the topic of obesity in the parliament sessions of the Spanish Congress of the Commons.

Within the revisions of the parliamentary initiatives performed up to now, there is a total of 15, out of which 11 are centred in the current legislative session running from 2004 to date. Of the 11 parliamentary initiatives of this period, 9 belong to the government control, 1 to a proposition and 1 to a hearing. However, of the 11 parliamentary initiatives, only 3 belong to the second half of the year 2004, and these refer to the NAOS strategy and the prevention measures to reduce infant obesity. Table 14 and graph 13.

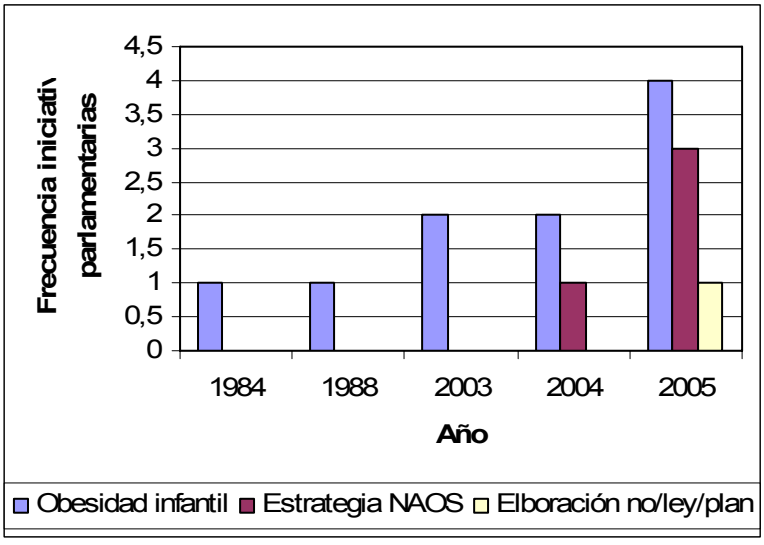
Up to the present legislative session it can be said that still is not a political construction of the topic of obesity, and the appearance of the frequency of the topic starts with the political proposal of the Ministry of Health and Consumption through the formulation of the NAOS strategy.

Table 14 Parliamentary Initiatives
Congress of the Commons 1984-2005

Year Initiative	Parliamentary initiative type	Topic Parliamentar	y Group
14/06/84	Question	Infant obesity: concrete measures of intervention	Conservative
12/12/88	Question	Infant obesity: prevalence	Democratic centre
27/10/03	Question	General obesity: measures to reduce the incidence	Conservative
01/12/03	Question	Infant Obesity: specific measures of intervention	Conservative
22/07/04	Question	NAOS political strategy: calendar of execution	Conservative
29/09/04	Question	Infant obesity: political measure of prevention	conservative
30/09/04	Question	Infant Obesity: political measure of prevention	Social
03/02/05	Question	Infant obesity: political measure of prevention	Conservative
15/02/05	Question	Infant Obesity: political measure of prevention	conservative
16/06/05	Question	Infant obesity: content of the agreement with the food industry to rule advertising	Socialist
30/06/05	Question	Infant obesity: activities being performed by the Superior Council of Sports.	conservative
11/07/05	Question	NAOS political strategy: calendar for the execution	conservative
11/07/05	Question	NAOS political strategy: budget and distribution	conservative
06/06/05	Preposition	Preparation of a plan	conservative
16/02/05	Hearing	Main lines of the NAOS strategy	Socialist

Source: **Congress of the Commons**

Graph 13. Frequency of the parliamentary initiatives according to the topic discussed at the Spanish parliament by MPs



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Section 8. Options for addressing obesity

8.3 Engagement with predefined options

When consulting to the particpants their opinion about the core options displayed like policy initiatives, most of them showed their agreement in general terms with the same ones, and made approaches about their perception of the Obesity problem, its definition and general perspective. On this matter different appreciations are observed those pass through the conception of the problem as a consequence of unbalance between food intake and caloric cost; as well as the importance that the individual assumes his own responsibility and also how he designs his own behaviour, at the same time the vision of which is the approach of the problem in Public health continues setting aside the social responsibility that exists in the same ones: other participants reveal the importance of working around the all initiatives, more than to specify in just a policy on the subject and even the conception of the obesity as the manifestation of the cultural uprooting, lost of identities, compulsive attitudes, that in a globalisation panorama are derived by the hyper consumption processes, disease, etc.

It was frecuently emphasized the idea that good or bad foods do not exist, but are the diets those that can be classified by this way, considering this aspect as an explicit or implicit limitation in the different definitions raised for the core options.

The differents approaches of the educative aspects, are those considered by the participants that they had to be part of the core options and were not included like they should. Health education repeatedly is considered from the discursive sphere like the most important option: *"For me it does not matter if my son knows all the rivers of Spain, if he does not know what he must eat"* (Cat1 Farming representatives).

In the detailed analysis of the options' group some elements appear such as:

With respect to "Change planning and transport policies" and "Improve communal sports facilities" we consider that there are complementary options and also related between them; they share a common aim which is to promote the physical and/or sport activity, and also it recognized that citizens have many difficulties to do these activities. Nevertheless is not clear its effectiveness in relation with the proposed objective, for several reasons as the own urban planning of the historical heritage, what is characteristic of the Spanish cities and the fact that having more availability in this type of spaces does not guarantee its use. *"it would be necessary to watch the access taking into account the agreements of the work days, there are many sport facilities, well located, but what is important is the final access is that somebody can allow the luxury to reduce working hours and other habits"* (Cat9 Senior official government policy maker in finance ministry).

In addition what is clear is that are the people with weight problems who have more sedentary behavior. *"There will be people who no matter how much the streets are adapted, they will travel on car"* (Cat7 Consumer representative).

The measures orientated towards the "Controls on food and drink advertising" and " Controlling sales of foods in public institutions" are not seen either with a particular optimism by the participants. They recognize the characteristics of the market and the valid agreements on commercialization as difficult elements of intervention in the light of the intention of this study. Furthermore, some participants find that the way for solving it, should not be based on coercitive measures, but on those that promote the individual and the society to take the right decisions. Consequently, they consider that it will be possible to reach the requested changes in the conditions of the market.

In the case of "Controls on food and drink advertising", there is a notorious perception of the cheating publicity that misleads the population and gets strengthened in the current novelty around the multiple esthetic treatments, the beauty and obtainment of perfect bodies, leaving aside health issues. *"Publicity does not change attitudes or healthy behaviours in public health, but in the consumption of products"* (Cat21 Trades union).

On the other hand, and in spite of having adequate and pertinent "Controlling sales of foods in public institutions", it must be said that its implementation will not determine changes in the consumption of certain products, considered as dangerous. Changes are expected though, in the places of purchase where these products will be available. Also in this point appear some arguments regarding to what extent some food is bad in itself when it depends on the quantity of consumption and other characteristics that also depend on the individual changeability. Some participants also rescue the importance of the individual liberty, in particular in the case of adults in order to choose based upon on adequate information.

Here some subjacent elements are recognized by some participants, the structural change of the family nuclear that implies changes in the culture and food habits to cope with an accelerate lifestyle. Along the lines, some aspects are mentioned as the change in the woman's role in current society.

The option regarding "Mandatory nutritional information labelling" was seen in a positive way in most of the cases, but for some participants, the proposal of the "traffic light" was not seen as adequate. Among other reasons, due to the difficulty to establish what would be considered "healthy" food in the light of the individual changeability and if by depending on the energetic density, this definition would lead to label other products of recognized nutritional importance as the olive oil, as "red" under this system.

On the other hand, many comments were made to the fact that interpretation of the label requires knowledge of the topic. Some people consider the information contained as difficult and complex to interpret, and with shortage of information, *"we see the products by their pack, how attractive they are, not for their composition"* (Cat14 School teachers). In general terms, the participants

consider that people do not read the labels, and in the specific case of persons with overweight problems, there is little awareness in this matter, and therefore they do not care. *"People do not stop buying certain products because the label says they are high in calories or because they do not read it, or because they do not care"* (Cat7 Consumer representative).

The economic measures proposed: "Subsidies on the healthy foods" and "taxes on obesity promoting foods" should not be, according to the arguments of several particpants, make part of this process. They recognized it is very difficult, in societies as the Spanish one, to achieve through fiscal measures a change pattern of consumption, and thus producing changes in the food habits. Consequently such fiscal changes do not have a positive impact on the people's health, *"people do not read more books because they are taxed with 4% VAT, and I do not believe they will eat more vegetables because the VAT is 1%"* (Cat7 Consumer representative).

Prices do not directly determine the election of food, overall because they are necessity products, even though taxes can limit the capacity of election. In fact taxes affect the price the consumer pays, and hence the global cost for the society. Within this context, one should take into account that socio economic inequalities related to obesity are as important as the geographical inequalities.

The European Commission food policies limit or prohibit subsidies not only to the market in the general population. In that case, subsidies could be any type of policy that allows a company to save or reduce costs, i.e. to favour the sales. Under this criterion subsidies could work. It could also be feasible to apply this type of subsidies in institutions as schools.

"Subsidies are very expensive because they refer to many units, they are millions of tons of products and it would lead to the fact that many companies would start to design this type of food" (Cat7 Consumer representative).

Discretionary Options

As elements to take into account when selecting discretionary options, it must be highlighted the differences presented depending whether the participants previously read or not the documents sent, as well as the degree of detail of such reading. Such situation was acknowledged by the same participants throughout the process. It also must be said that the experts that at the time of the interview had the papers with their own remarks, underlined and alike, showed a major disposition to wide the range of options, whether by election of some of the discretionary options or by the adding of additional options. In the end, very few participants limited their analysis to the group of core options.

When inviting the participants to complete the options of policy with those initiatives that in their opinion had not been included in full extent, again many comments arose on the importance of generating educational activities.

The discretionary options that were highly considered by the particpants were in this order: Improved health education, Food and Health education, Controls on food composition, Control of Marketing terms, and Provide healthier catering menus.

Again in this phase arise many arguments in regard to the social aspects, individual freedom, extension of the measures, difficulty and complexity of the problem to establish adequate levels to the diversity of diets, and to the plurality of societies in which we live on, the nutritional profiles, the food culture and other factors. "*In fact the problem of modern society is that there is a difficulty between what is politically correct and the individual freedom, and therefore in a system with both freedom and food abundance this problem will never be solved"* (Cat2 Food procesing company).
This same situation is foreseeable when some experts call the attention to the fact that it is better to talk about citizens rather than consumers, *"because a consumer is a machine of consumption, and citizen is a person who has to be able to think"*, (Cat2 Food procesing coompany) and thus, the measures to implement should allow the management and control of his own body.

The participants who decide not to include the option of Reform the common agricultural policy – CAP, argue their decision on aspects ranging from the lack of knowledge of it to the insecurity regarding the statement of how this relates to obesity according to what has been established in the definition. In other cases they also mention the quantity of implications of the international commerce, subsidies, competition, relations between developed and developing countries, which all in all make of it a disposable option. "*The CAP fulfils many objectives to blame obesity. It is like starting building a house from the roof*" (Cat4 Food retailers).

In relation to the options that encourage the supply of incentives, although the promotion is positively seen, it does not seem to be reasonable to award someone for doing the things right since this is in itself his obligation.

More than looking for the creation of new administrative instances orientated to the problem of obesity, the participants in general agree on the need to develop the actions that have been proposed up to date. All of this with the purpose to develop the capacities that are lacking and to have the necessary means to guarantee its effectiveness.

To sum up, the interviewed people in this part consider that:

"General recipes for the population cannot be given" (Cat21 Trades union).

"Eat well has never been so difficult, but never so easy either" (Cat16 Health journalists).

Table X: Details of options selected by participants and categories of participant.
From a total of 23 participants in 21 categories

Policy option	Scored by	Scored by (categories)
Core options 1 – 7	Scored by 21 - 23 participants in all 21 categories.	
Discretionary option 8: Improve training for health professionals	Scored by 11 participants, in 11 categories.	Cat 11. Town and transport planners Cat 2. Food processing company Cat 20. Sport and fitness NGOs Cat 5. Representative of small health food retailers Cat 1. Farming industry representative Cat 18. Pharmaceutical industry Cat 15. Expert adviser nutrition/obesity Cat 7. Consumer groups Cat 4. Large food retailers Cat 17. Advertising industry Cat 3. Representative of large comercial catering chains
Discretionary option 9: Common Agricultural Policy reform	Scored by 7 participants, in 7 categories.	Cat 10. Public health professionals Cat 20. Sport and fitness NGOs Cat 17. Advertising industry Cat 8. Health ministry official Cat 9. Policy maker in finance ministry Cat 12. Life insurance industry Cat 21. Representative of trade unions
Discretionary option 10: Improved health education	Scored by 18 participants, in 18 categories.	Cat 5. Small health food retailers Cat 2. Food processing company Cat 20. Public interest sport and fitness NGOs Cat 14. School teachers Cat 21. Representative of trade unions Cat 7. Consumer groups Cat 8. Senior official government policy maker in health ministry Cat 3. Large comercial catering chains Cat 13. Fitness providers Cat 11. Town and transport planners Cat 16. Health journalist Cat 4. Large food retailers Cat 1. Farming industry representatives Cat 6. Public sector caterers Cat 18. Pharmaceutical industry Cat 17. Advertising industry Cat 15. Expert adviser nutrition/obesity Cat 12. Life insurance industry
Discretionary option 11: Controls on food composition	Scored by 5 participants, in 5 categories.	Cat 6. Public sector caterers Cat 20. Sports and fitness NGOs Cat 14. School teachers Cat 4. Large food retailers Cat 7. Consumer groups

Policy option	Scored by	Scored by (categories)
Discretionary option 12: Incentives to improve food composition	Scored by 6 participants, in 6 categories.	Cat 6. Public sector caterers Cat 3. Large comercial catering chains Cat 20. Sports and fitness NGOs Cat 4. Large food retailers Cat 17. Advertising industry Cat 21. Representative of trade unions
Discretionary option 13: More obesity research	Scored by 10 participants, in 10 categories.	Cat 2. Food processing company Cat 20. Sports and fitness NGOs Cat 14. School teachers Cat 5. Representative of small health food retailers Cat 1. Farming industry representative Cat 3. Representative of large comercial catering chains Cat 15. Members of expert nutrition/obesity Cat 16. Health journalist Cat 4. Large food retailers Cat 17. Advertising industry
Discretionary option 14: Provide healthier catering menus	Scored by 11 participants, in 11 categories.	Cat 2. Food processing company Cat 10. Public health professionals Cat 20. Sports and fitness NGOs Cat 4. Large food retailers Cat 5. Small health food retailers Cat 12. Life insurance industry Cat 11. Town and transport planners Cat 21. Representative of trade unions Cat 17. Advertising industry Cat 6. Public sector caterers Cat 8. Health ministry official
Discretionary option 15: Food and health education	Scored by 15 participants, in 15 categories.	Cat 7. Consumer groups Cat 2. Food processing company Cat 20. Sports and fitness NGOs Cat 14. School teachers Cat 6. Public sector caterers Cat 17. Advertising industry Cat 15. Member of expert nutrition/obesity Cat 11. Town and transport planners Cat 1. Farming industry representative Cat 5. Small health food retailers Cat 4. Large food retailers Cat 3. Large comercial catering chains Cat 16. Health journalist Cat 8. Health ministry official Cat 18. Pharmaceutical industry
Discretionary option 16: Medication for weight control	Scored by 2 participants, in 2 categories.	Cat 17. Advertising industry Cat 18. Pharmaceutical industry
Discretionary option 17: Substitutes for fat and sugar	Scored by 5 participants, in 5 categories.	Cat 17. Advertising industry Cat 6. Public sector caterers Cat 3. Large comercial catering chains Cat 21. Representative of trade unions Cat 4. Large food retailers

Policy option	Scored by	Scored by (categories)
Discretionary option 18: New government body	Scored by 6 participants, in 6 categories.	Cat 8. Senior official government policy maker in health ministry Cat 12. Life insurance industry Cat 20. Sports and fitness NGOs Cat 6. Public sector caterers Cat 3. Representative of large comercial catering chains Cat 5. Representative of small health food retailers
Discretionary option 19: Control of marketing terms	Scored by 11 participants, in 11 categories.	Cat 12. Life insurance industry Cat 20. Sports and fitness NGOs Cat 14. School teachers Cat 1. Farming industry representatives Cat 7. Consumer groups Cat 6. Public sector caterers Cat 8. Senior official government policy maker in health ministry Cat 21. Representative of trade unions Cat 5. Representative of small health food retailers Cat 17. Advertising industry Cat 4. Representative of large food retailers
Discretionary option 20: Physical activity monitoring devices	Scored by 5 participants, in 5 categories.	Cat 3. Large comercial catering chains Cat 2. Food procesing company Cat 20. Sports and fitness NGOs Cat 17. Advertising industry Cat 6. Public sector caterers

8.4. Engagement with additional options

Once the participants valued the group of core options and select the discretionary options that in their opinion should have been part of the political initiatives in relation to the problem of obesity, they were encouraged to look for new proposals. Thus, they started defining those options in the most precise way that had either not been considered in the two groups described or responded to changes in the definitions of the preconceived options.

Only three of the 21 participants did not suggest any additional political option.

The most frequent suggested option was the one related to the promotion, education and culture in physical activity, followed by other proposals also of educational type as education to educators, education to parents, education on nutrition, and production of food, culture of food and promotion of the cultural change.

Other group of proposals obey to modifications and amendments in the predefined initiatives as: healthy canteens and inns; new government body to coordinate food policies and not obesity; sustainable and healthy urbanism; supply healthy menus; proposal of a new form of labeling: nutritional labeling by consensus.

Also there is a group of “new” initiatives suggested by some of the participants and which in many cases reflect the area of expertise as represented by the stakeholder who proposes them: to develop a new restaurants sector, new naming in business management, schools menus; public funding of medicines against obesity; fight against the miracle products.

Furthermore, there are other groups of proposals where common elements are highlighted. A first group is orientated to improve the consumption of food from a global non- coercitive perspective through proposals as: ideal and cheap food, food diversity, nutritional commandments, promotional gifts to promote the consumption of healthy food; healthier food, new system of production, controls and incentives in favour of production, control of the size of the portions, geographical accessibility. A second group emphasizes on the need to obtain a major knowledge in topics related to the problem: investigation in new healthy products, investigation in food inequalities, BMI systematic evaluation. A third group is composed by more diverse options: publications control, adequate prescription, labour incentive, autonomy.

In general terms in the group of additional options a remarkable fact is the fact that all initiatives are orientated from a global /community perspective in an egalitarian implementation scope of action on the problem, leaving room to foresee that this is more a matter of individual responsibility. A problem in which the social and institutional environment should play an active role for its effective resolution .

Tabla X1. Aditional options set by the participants

Policy option	**Added by**
Control of the size of portions	Cat7 Consumer organisations
Promotional gifts to promote consumption of healthy food	Cat7 Consumer organisations
Nutricional labeling by consensos	Cat7 Consumer organisations
Outdoor Physical Activity	Cat20 Sport/fitness NGOs
Healthier food	Cat20 Sport/fitness NGOs
Healthy canteens and Inn	Cat21 Trades union
Ideal affordable food	Cat21 Trades union
Food diversity	Cat1 Farming representative
New governmental organisations	Cat1 Farming representative
New form of labeling	Cat2 Food processing co.s
Education on nutrition and production of food	Cat2 Food processing co.s
Sustainable and healthy urbanism	Cat3 Large catering company
Education to educators	Cat3 Large catering company
Research on new healthy products	Cat4 Large food retailers
Promotion of the physical activity	Cat5 “Health” food retailers
Publications control	Cat5 “Health” food retailers
Labour incentive	Cat5 “Health” food retailers
Education to parents and educators	Cat13 Sport providers
Sport education	Cat13 Sport providers
Physical activity education	Cat17 Advertising industry
Community campaings	Cat17 Advertising industry
Nutritional informations of products	Cat17 Advertising industry
Public funding of medicines against obesity	Cat18 Pharmaceutical industry
Fight against the miracle products	Cat18 Pharmaceutical industry
Education in physical activity	Cat8 Official health department
Promotion of physical activity	Cat8 Official health department
BMI Sistematic evaluation	Cat8 Official health department
School menus	Cat8 Official health department
Create a new restoration sector	Cat 6 Public sector caterers
New naming in business management	Cat 6 Public sector caterers
Sustainable and healthy urbanism	Cat 11 Town and transport planners
Promotion of the cultural change	Cat 11 Town and transport planners
Culture of the physical activity	Cat 14 School teachers
New system of production	Cat 14 School teachers
Control and incentives in favour of production	Cat 14 School teachers
More research on obesity	Cat10 Public health professional
Geographical accessibility	Cat10 Public health professional
Food Culture	Cat10 Public health professional
Research in food inequalities	Cat10 Public health professionals

Policy option	Added by
Supply healthy menus	Cat15 Expert commitee member
Promotion of the physical activity	Cat15 Expert commitee member
Adequate prescription	Cat15 Expert commitee member
Autonomy	Cat15 Expert commitee member
Nutricional commandments	Cat16 Health journalists

Section 9. Developing criteria

9.1 Introduction

The "criteria" are the different factors, conditions or aspects that with total freedom, the participants have in mind when they compare, choose and/or settle down differences in favour or againts the different policy options. These "criteria" can guide some issues that the participant feels like relevant to his evaluation of anyone of the options.

The criteria are equally applied for the evaluation of all options, is to say even the interviwee could considers it for an individual option. For example the "economic cost" of the option “Subsidies on healthy foods”, the criterion "economic cost" is equally applied for the other selected options.

Like strategies for the development of that stage, the participants were encouraged to identify the factors that in their opinion were important to distinguish the proposal policy options in order to respond to the increasing challenge of obesity, and in the cases in which it was necessary, we checked the discursive elements that the participants previously expressed in the stage of options evaluation, which meant they justified the reasons to choose between the same ones, in addition they were invited to look over the definitions raised in the recognized criteria on which it could have overlapping or a too wide frame of evaluation.

Another way used, was that as an important criteria by the participant, he inmmediately continued to the score stage under this criteria, in such a way that the process could help to recognize the process and it helps the new criteria. Also it was reminded what has been stated on the document “Example to the Stakeholders”, in which was state the use of the methodology MCM (Multi-Criteria Mapping Metodology) considering all its stages in a process of selection of energy options and which was sent by post mail to all the interviewed, in the first stage of the interview. Like last option, which was required in a pair of cases, general examples of criteria were offered, animating to the participant to develop his own definitions and specifications about the same ones.

As the experts carried out the selection of their criteria, at the same time we requested a definition and detailed explanation to them of the meaning of each criterion, why they considered it an important and even in some cases the interviewed people illustrated with examples the reasons of their selection.

All the participants were explained at any time during the process, they would be in freedom to check the definitions of the criteria, to refine, to extend them and even to eliminate them. The need for change or adjustment in this stage appeared mainly in the aspects related to the cost, mainly for the need of the interviewed person at the time to reach the score stage. In other cases it was observed, in opinion of the interviewer that the interviewed person chose to eliminate some of the criteria initially selected, like a strategy to reduce the time of the interview.

Altogether, a total of 93 criteria were obtained from the 21 participants, those criteria were oriented in a greater number to the Efficacy in addressing obesity and followed by the categories of Societal Benefits and Social Acceptability. The “Extra health benefits” classification about health the one which which got the smaller number of criteria, because just four of the participants considered factors that were susceptible to be included in this category.

In the particular case of the criteria "economic cost", is important to highlight that several of the participants agree in consider that it does not matter who assume the direct costs of any of the options, because the citizens are who always ends up paying it.

9.2 Appraissal Criteria

For almost all the participants, the selection and criterion valuing represents the most difficult one, due to degree of reflection that it implies and to the self valuing of concepts required to make clear this phase. In some cases, the stakeholders proposed, as in the other options, the possibility to be offered a referral point or a framework of criteria on which to make their choices. Others even recommended to emphasize on the participants during the time before to the interview, so they can do this exercise before developing the interview, and thus to make it more enriching.

As a result of this process, the participants established between 3 and 8 criteria with an average of 4,4 criteria per participant. Table 1.

A frequent concept that arose in this phase among the interviewees was the importance of the interaction among the different actors, as a key element for success:
“Obesity policy must be a Global policy of the all policies”, (Cat18 Pharmaceutical industry) *“… is a multifactorial problem because there is few possibilities to change the behaviour”* (Cat21 Trades union).

By the same token, it is foreseeable again the dualism between the criterion based on the role of the individual and of those which imply the whole society: *“People have to be aware of the things they have to do by themselves”* (Cat8 official in health ministry).

“…governments must promote, but what has to be achieved is the responsibility of people about their food, all policies have to look forward to make the person responsible.” (Cat12 Life insurance co.s).

“It is not a matter of spelling policies incomprehensible for individuals, but to make the person to look after his/ her own body, his/her food. In all political actions a strategy must be defined, which means the general guidelines, and then how to manage that strategy”. (Cat2 Food processing co.s).

In order to analyze and compare the “criteria” established by the interviewed people, these were grouped into categories called “Results”. To perform this process in each one of the participating countries, an initial exploration of the results was performed which was used as the basis for the formulation of the first hypothesis of analysis. This information was forwarded to the team co-ordinating the project which makes a proposal of categories by results. Such categories were analyzed in the second training workshop held in September 2005. Later using the Blogspot, tests and discussions were held among the investigators of different countries until obtaining the final grouping on which analysis and comparisons have been performed as presented in this report.
To assign each one of the criteria to the corresponding result, a meticulous reading was performed, not only of the denomination in noun as assigned by the expert, but furthermore of the detailed definition that the interviewed person gives to that name. Thus, it was possible to determine to which of the nine categories of results it could be assigned.

In the category of “others” it must be said that not only those methods orientated to the prompt implementation of the options along the time were taken into account, but also those measurements orientated to the perdurability and permanency of the proposed option.

Table 1. Criteria grouped by results and by participant

Issue	Criteria	Participant
Economic impact on individuals.	Cost Benefit	Cat21. Trades unions
	Cost of products	Cat1. Farming industry
	Cost for citizen	Cat16. Health journalists
	Cost	Cat4. Large food retailers
	Economic for the individual	Cat3. Large commercial catering chains.
	Cost benefit for the individual	Cat13. Commercial sport co.s
Economic impact on commercial sector.	Expenditure cost	Cat5. Health food co.s
	Economic viability	Cat16. Health journalists
	Cost for the society	Cat17. Advertising industry
	Cost benefit for the society	Cat3. Large commercial catering chains
	Eficciency in the utilisation	Cat11. Town and transport planners
	Health expenditure	Cat19. Public health NGO
	Economic	Cat10. Public health Professionals
Economic impact unspecified.	Economic cost for the society	Cat7. Consumer groups
	Cost Benefit	Cat8. Health ministry official
	Cost	Cat15. Expert adviser nutrition/obesity
	Cost effectiveness	Cat15. Expert adviser nutrition/obesity
	Implementation cost	Cat13. Commercial sport co.s
	Economic	Cat20. Sports NGOs
	Economic for the society	Cat14. School teachers

Issue	Criteria	Participant
Efficacy in addressing obesity.	Efficiency	Cat21. Trades unions
	Efficacy in addressing obesity	Cat7. Consumer groups.
	Obesity prevention	Cat1. Farming industry.
	Public Health	Cat5. Health food co.s
	Efficacy	Cat16. Health journalists.
	Effectiveness	Cat9. Policy makers in finance ministry
	Specificity	Cat9. Policy makers in finance ministry
	Effectiveness	Cat4. Large food retailers.
	Effectiveness	Cat17. Advertising industry.
	Effectiveness	Cat3. Large comercial catering chains.
	Efficacy	Cat18. Pharmaceutical industry.
	Effectiveness	Cat15. Expert adviser nutrition/obesity.
	Effectiveness on habits	Cat12. Life insurance industry
	Public Health	Cat19. Public health NGO
	Policy efficiency	Cat2. Food procesing co.s
	Awareness degree	Cat2. Food processing co.s
	Impact on obesity	Cat10. Health Public professionals
	Effectiveness	Cat20. Sports NGOs
Extra health benefits.	Influence in the health of the population	Cat7. Consumer groups.
	Benefit for the society	Cat6. Public sector caterers
	Quality of life	Cat3. Large comercial catering chains
	Public Health	Cat11. Town and transport planners
Others	Immediacy of the measure	Cat16. Health journalist.
	Expected term	Cat4. Large food retailers.
	Sustainability	Cat8. Health ministry official
	Long term	Cat18. Pharmaceutical industry.
	Opportunity	Cat15. Expert adviser nutrition/obesity
	Sustainability	Cat12. Life insurance industry
	Time	Cat13. Commercial sport co.s
	Time	Cat2. Food processing co.s
Practical feasibility.	Feasibility	Cat21. Trades unions
	Participation of the State	Cat1. Farming industry.
	Opportunity	Cat4. Large food retailers.
	State commitment	Cat6. Public sector caterers
	Political	Cat3. Large comercial catering chains
	Feasibility of applicability	Cat18. Pharmaceutical industry.
	All sectors responsibility	Cat18. Pharmaceutical industry .
	Feasibility	Cat15. Expert adviser nutrition/obesity
	Competence level	Cat15. Expert adviser nutrition/obesity
	Complexity	Cat14. School teachers.
	Complexity	Cat5. Health food co.s
Social acceptability.	Capacity of election	Cat21. Trades unions.
	Impact in the population	Cat5. Health food co.s
	Acceptability	Cat16. Health journalists.
	Social rejection	Cat9. Policy makers in finance ministry

Issue	Criteria	Participant
	Ownership	Cat17. Advertising industry.
	Degree of ownership by the community	Cat6. Public sector caterers
	Active participation	Cat8. Health ministry official
	Acceptance	Cat15. Expert adviser nutrition/obesity.
	People's awareness raising of people	Cat12. Life insurance industry.
	Awareness raising	Cat11. Town and transport planners
	Social acceptability	Cat10. Health public professionals.
	Accesibility	Cat10. Health public professionals
	Facility	Cat20. Sports NGOs
	Capacity of creating healthy habits.	Cat13. Commercial sport co.s
Societal benefits.	Capacity of election	Cat1. Farming industry.
	Human capital	Cat9. Policy makers in finance ministry
	Personal freedom	Cat17. Advertising industry.
	Community commitment	Cat6. Public sector caterers
	Impact in infants	Cat8. Health ministry official
	Awareness raising to the community	Cat8. Health ministry official
	Catalyst effect	Cat8. Health ministry official
	Coherence	Cat18. Pharmaceutical industry.
	Equity / balance	Cat15. Expert adviser nutrition/obesity.
	Social penetration	Cat12. Life insurance industry.
	Freedom of choice.	Cat13. Commercial sport co.s
	Influence in the infants	Cat11. Town and transport planners
	Education	Cat19. Public health NGO
	Quality of life	Cat19. Public health NGO
	Coherence	Cat2. Food processing co.s
	Capacity of election	Cat10. Public health professionals
	Cultural impact	Cat14 School teachers

9.3 Weightings

The values reflect general individual judgment of the particpant regarding the importance of the different criteria in themselves. For example, the feasibility of something (value) is a very different matter to the general importance of the feasibility compared to the impact in health (a certain value). The value therefore, depends not only on the general importance of the criterion, but also on how big was the difference in the valuing of the option under the different criteria[1].

Hence, judgments on values are based on the differences in the punctuation for the best and the worst options under each criterion. **That is the importance of the differences of that valuing which was compared and weighed[1]**.

[1] Stirling, A. Multi-Criteria Mapping: a detailed interview manual, versión 1.1, produced for the PORGROW Project, SPRU. 2004.

As supportive mechanism, the MCM software recalls the best and worse valuing of the options under each criterion and the peculiar assumption that the person interviewed made in the assignment of that score.

Taking into account the above said, in this part of the interview, each participants were asked to indicate the relative value, a certain numerical weight of the valuing judgments considered in the analysis under different criteria. For example, the feasibility could have been more important for the participant interviewed than the quality of life, and vice-versa.

Furthermore, the participant were reminded on the need to have into account as clear as possible, which was the comparison that was being carried out, in so far as although the impact in health was considered more important than the feasibility, what was it taking about? How much impact in health? How much feasibility? A little increase in the health impact is more important than a big increase in the feasibility?

In order to assign a value to the different criteria, various strategies were offered and the person interviewed was allowed to choose what he deemed was more comfortable: One way was simply to divide an even number, i.e. 100 – "important points" among the different criteria. Another way was to value each criterion in particular, in a scale from 0 to 100. Another suggestion was to start the valuing by the criterion that was considered the most important (assigning the highest value), or at least the least important (assigning the lowest value), and value the rest in comparison to it, using the scale of preference. The most used option was to divide "100 important points" among the different criteria. Once the values were assigned and using the software tools, a hierarchy was set assigning a total of 100 "important points".

In Spain, none of the persons interviewed identified any criterion as a principle.

In general terms, the participants found this, a nice phase and easy to execute.

The 93 proposed criteria by the 21 interviewed people were classified for the analysis and comparison, following the process mentioned in 9.2 in the 9 possible classifications of results. This corresponds to what was set for the analysis and comparison in the 9 participating countries. Table 2.

Table 2. Classification of the number of criteria per result.

Result	**Number of criteria per result**
Economic impact on individuals.	6
Economic impact on the public sector.	7
Economic impact unspecified	7
Efficacy in addressing obesity	18
Extra health benefits	4
Others	8
Practical feasibility	11
Social acceptability	14
Societal benefits.	17

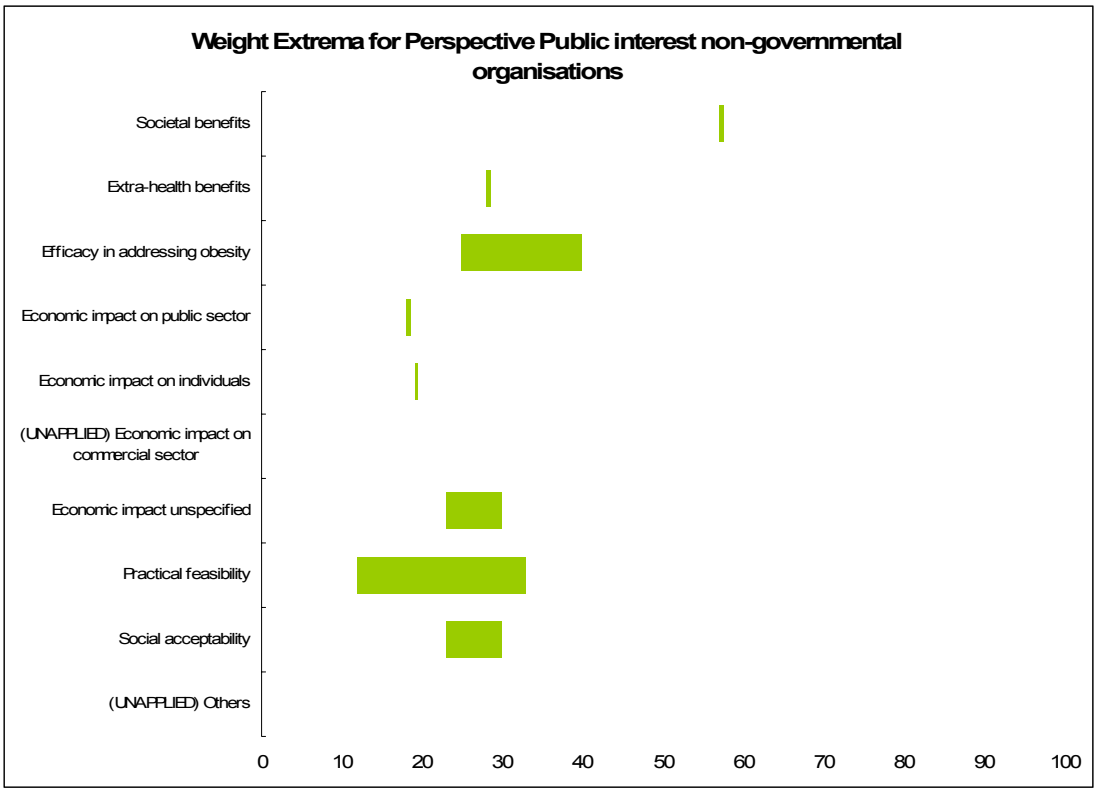
Below are shown the results of this phase, having as basis the classification of the interviewed people for the different perspectives:

In the group of Public interest non governmental organisations, to which 4 of the interviewed people belong to: Representative of consumer groups, Public Health Non Governmental representatives, Public interest sport and fitness NGOs and Representative of trade unions, 15 criteria were identified, classified in eight categories of results.

Graph 1. The model of classification for this perspective shows the scope of the main values regarding the efficacy in addressing obesity. This importance was seen by one of the interviewed persons as: *"to be obese is to suffer. Few individuals or persons feel at ease in their condition of obesity due to the social pressure against them"* (Cat21 Trades union).
The practical feasibility was also considered because "*The feasibility is important mainly for the necessary analysis of resources and results of the options. Furthermore, it is what really tells if with the means available it will be possible to obtain the results expected."* (Cat21 Trades union).

These aspects were followed by the social acceptability and the Economic impact unspecified. In the four remaining categories, only one of the members of the perspective developed some criterion for a certain result.

Graph 1.



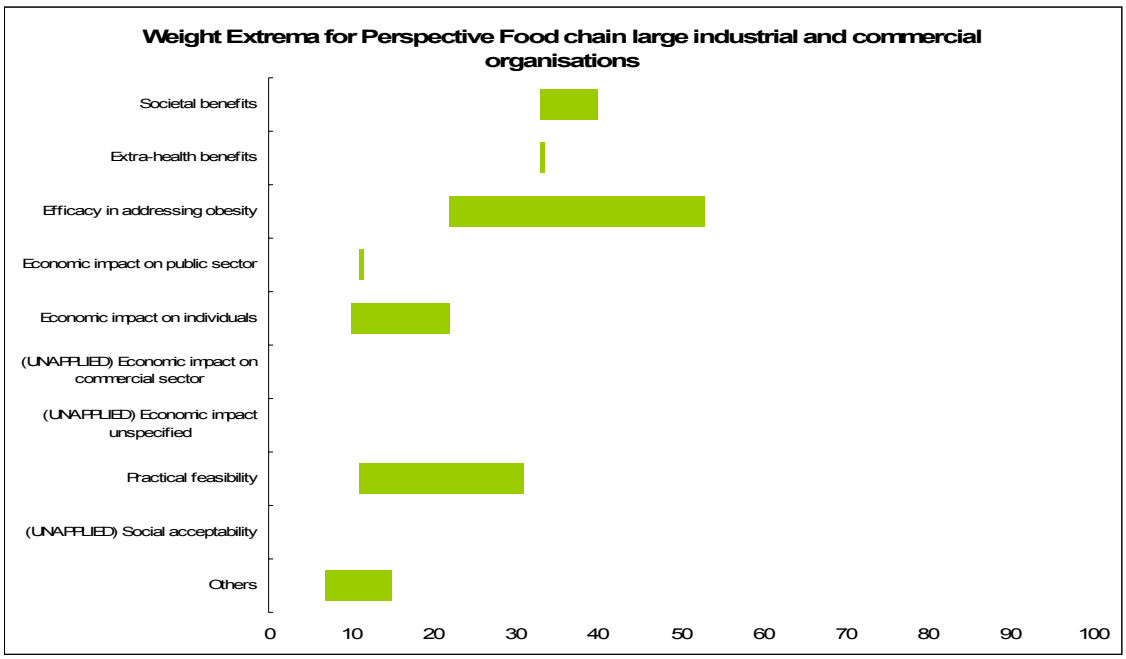
For the category of Food chain, large industrial and commercial organisations: Farming industry representatives, Food processing company representatives, Representatives of large commercial catering chains and Representative of large food , 17 criteria were identified, classified in seven categories of results. Graph 2.

In this group a priority clearly outstands towards the matters orientated to the efficacy in addressing obesity, similar to the perspective mentioned above and taking into account that " *the fight against obesity has to be more a pack of measurements of preventive type than a clash type"* (Cat1 Farming industry), followed by the category of societal benefits in which it is clear the challenge to the true interests and motivations for the decision making because, *" At the core of the problem of the modern society there is a difficulty between what is politically correct and the individual freedom, therefore in our system of liberty and abundance of food, this problem will never be solved."* (Cat2 Food processing co.s).

And regarding the clear importance of the practical feasibility it says:
"… this is a complex matter that requires a decisive and sustainable action in the time. Once taken the decisions, what will be difficult and costly, is to execute them in the practice. This is another matter" (Cat4 Food retailers).

"The project involves topics which very much depend on the organization of the society, on the influence of Brussels, local governments…thus, globally speaking, this pack which is very ambitious, is long and some things can be used and some others will be slower. To sum up, ***I like it*** *but being realistic, it is difficult…"* (Cat2 Food processing co.s).

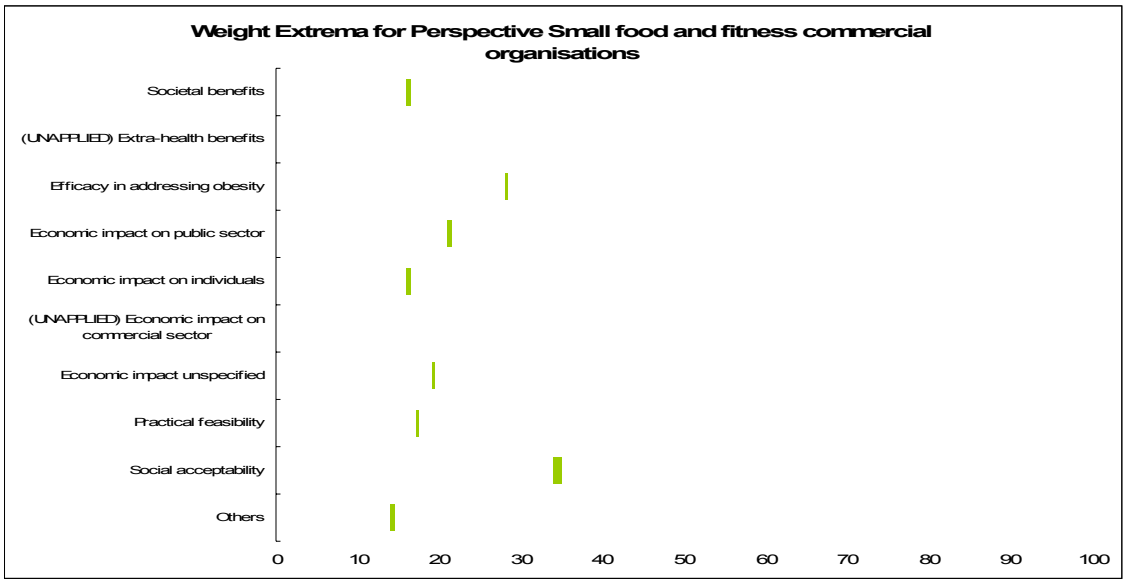
Graph 2.



In small Food and fitness commercial organisations, to which two of the interviewed people belong to: Representatives of small "health" food retailers and representatives of commercial sports or fitness providers, 9 criteria were identified, classified in eight categories of results. Graph 3. In this case it highlights the fact that the interviewed people only agree in the social acceptability grouping, and both agree in giving the highest relative value to that condition:

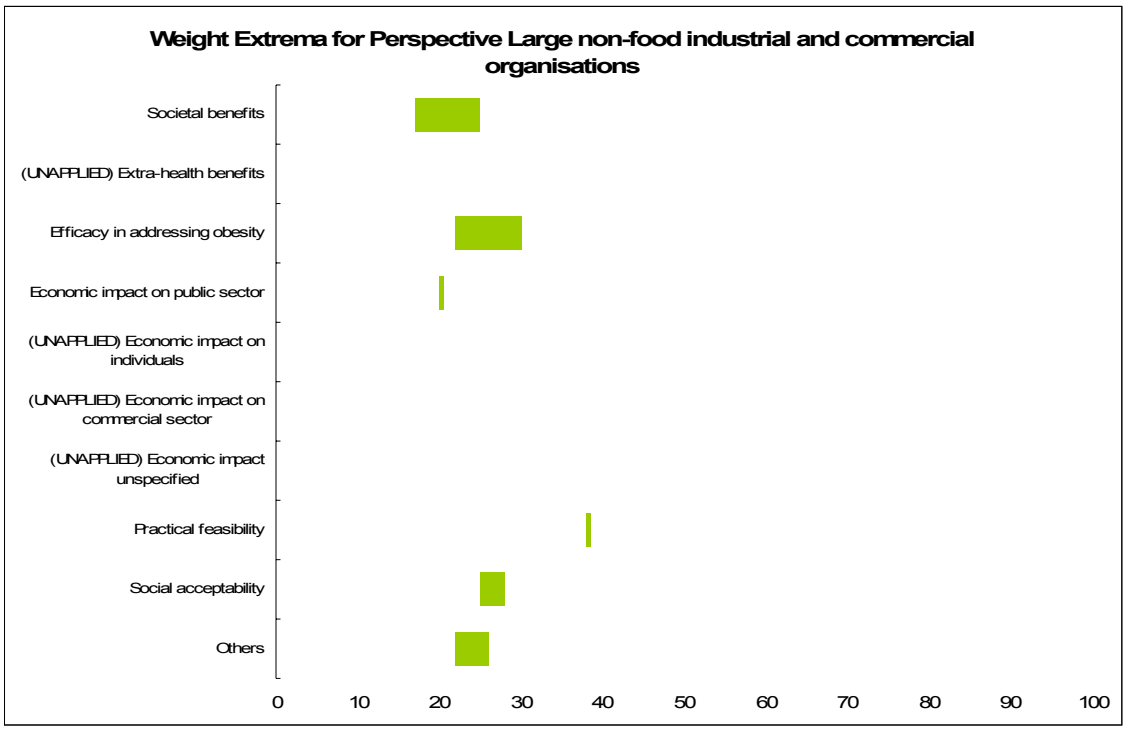
"The most important is to reach to impact the population, if this is not aware, the campaigns are worthless" (Cat5 Health food co.s), *"If the results of the implementation of the policies are beautiful, but they are not used, the investment is worthless. Hence, it is a matter of the capacity of the policy to create a habit, a healthy routine, one more daily obligation"* (Cat13 Commercial sports co.s).

Graph 3.



For the Large non-food industrial and commercial organisations to which three of the interviewed ones belong to: Representatives of life insurance industry, Representatives of advertising industry and Representatives of the pharmaceutical industry, 13 criteria were identified in six categories of results. Graph 4. In the analysis as a whole of this perspective, the scope of the main relative values correspond to the efficacy on addressing obesity, related to both the food habits and the physical activity practice defined in general terms as "*the capacity of the policy to modify habits, reducing them or implanting them in the long term."* (Cat17 Advertisers agencies).

Graph 4.



For this perspective it also stands out the social acceptabilitycategory in which the focus orientated to the individual is highlighted:

"Whatever means information, information transparency, is essential, because this helps the individual to adopt his own decisions with responsibility. Nobody is going to prohibit or oblige the person. It is he himself who has to assume his own responsibility. Therefore it is matter to do whatever is possible to help him to choose in a positive way". (Cat17 Advertisers agencies).

"The goal is to have people involved, people aware, governments should promote it, but what has to be achieved is that the responsibility of food rests on the person, it cannot rest on the school, either the State, people have to be involved and think that food is a vital part of their health, it is necessary that people identify that food can be a benefit or a risk for their health, all measures have to be targeted to make the individual responsible. " (Cat12 Life insurance co.s).

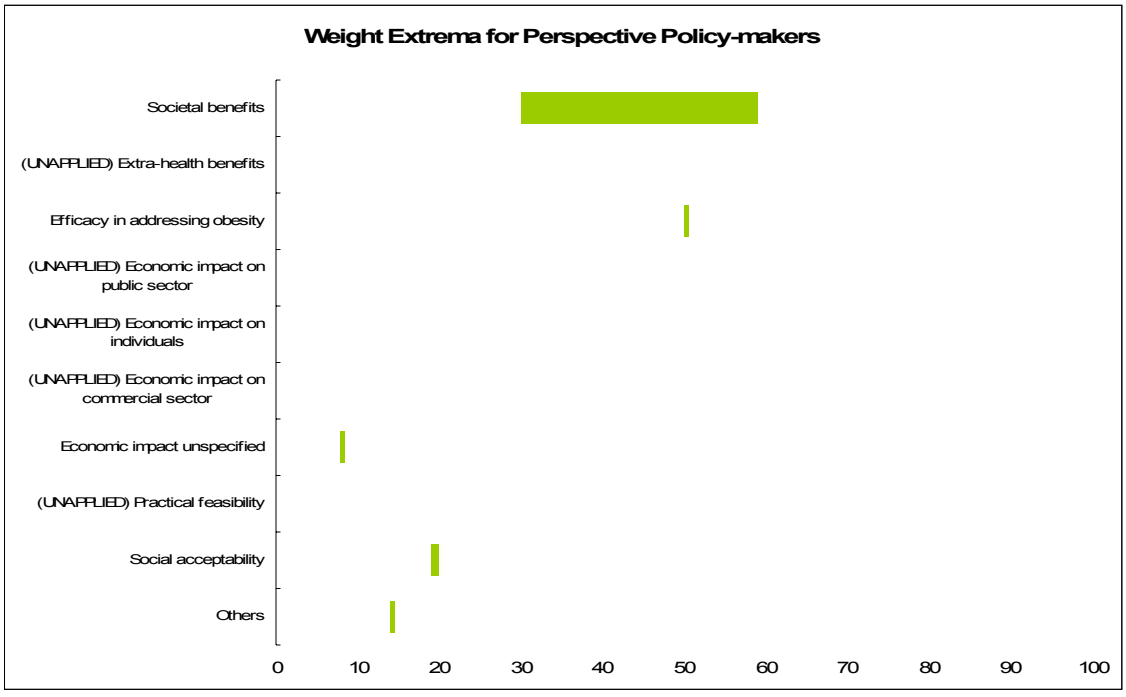
Additionally, results in terms of Societal benefits stand out, due to the fact that "*problems resulting from reasons and multifactor origins, require multiple solutions…"* (Cat17 Advertisers agencies) *and "the proposed objectives in relation to obesity, do not depend on this report, but on the political willingness"* (Cat18 Pharmaceutical industry).

It must be said that none of the participants in this group, considered important the establishment of any type of criteria from the perspective of economic impact on individuals, commercial sector or any other unspecified type.

In the perspective of policy makers to which two of the interviewed ones belong to: Senior official government policy makers in health ministry and the Senior official government policy makers in finance ministry, 10 criteria were identified, classified in five categories of results: from the perspective it is clearly seen the importance of the scope of the value assigned to the result in terms of social benefits. Graph 5. In this classification, both of participants call the attention to the fact that the measures to be implemented actually create an impact in a positive way in the infant and adolescent population: *"That it mainly emphasizes on the human capital, it means mainly the youth than the elderly"* (Cat9 Policy maker in finance ministry). *"To change habits of adults is complicated, thus, the main policies should be targeted to infants and to have in this population a direct repercussion"* (Cat8 Health ministry official).

Policy makers are also orientated towards the development of actions that promote the ownership at an individual level: "*Treat the consumer as a non-adult generates rejection. Therefore, the options have to be of a major acceptance, not causing rejection"* (Cat9 Policy maker in finance ministry), *"People have to be aware that they need to do something by themselves"* (Cat8 Health ministry official).

Graph 5.



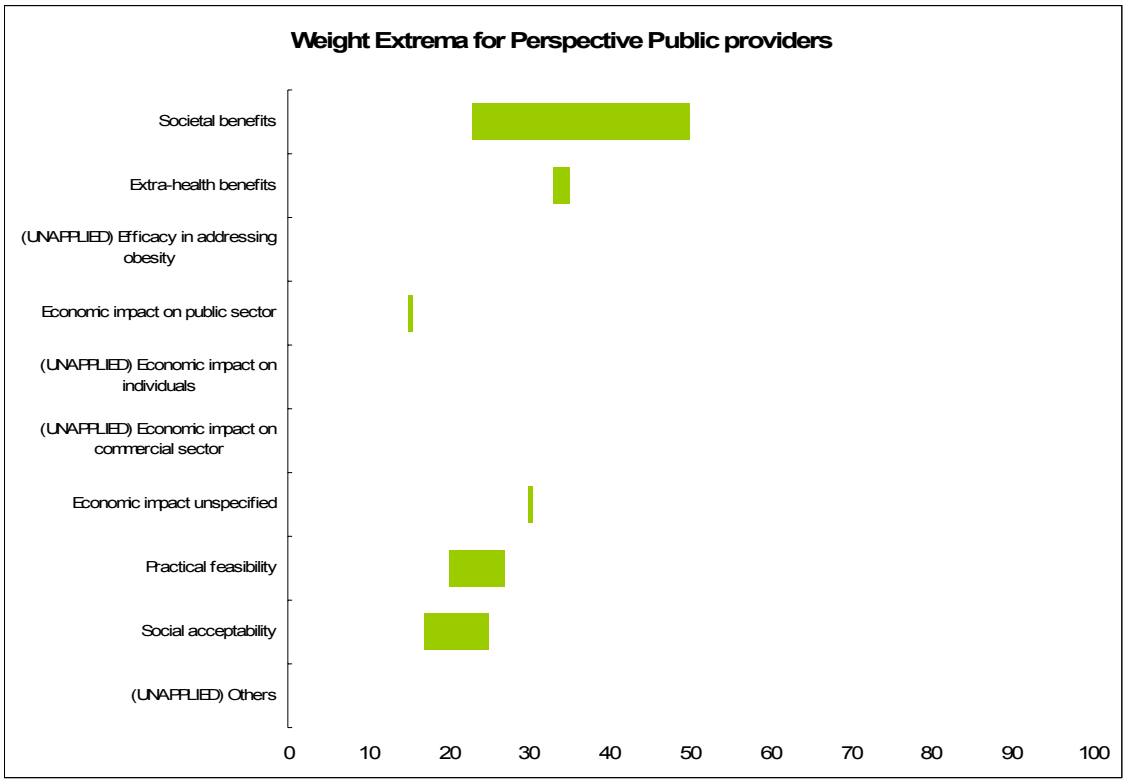
In the Public providers category to which three of the participants belong to: Town and Transport planning, Representatives of public sector catering and School teacher representatives, 11 criteria were identified, classified in six categories of results.
Graph 6. In this perspective as in the policy makers, the value assigned to the results in terms of societal benefits was prioritized. However, in this group, a different trend is shown, in so far as the assignment of responsibilities stands out from a global approach:

"The major responsibility of the problem lies in the government, followed by schools and in third place parents…" (Cat6 Public sector caterers).

"… obviously, when behavioural policies are to be designed, the type of resources has to be taken into account, as well as their correct use…" (Cat11 Planners).

"The difficulty is for the family, the person who doesn't know how to deal with it. The State knows how, but is not interested or is bound by its commercial and economic interests" (Cat14 Teachers).

Graph 6



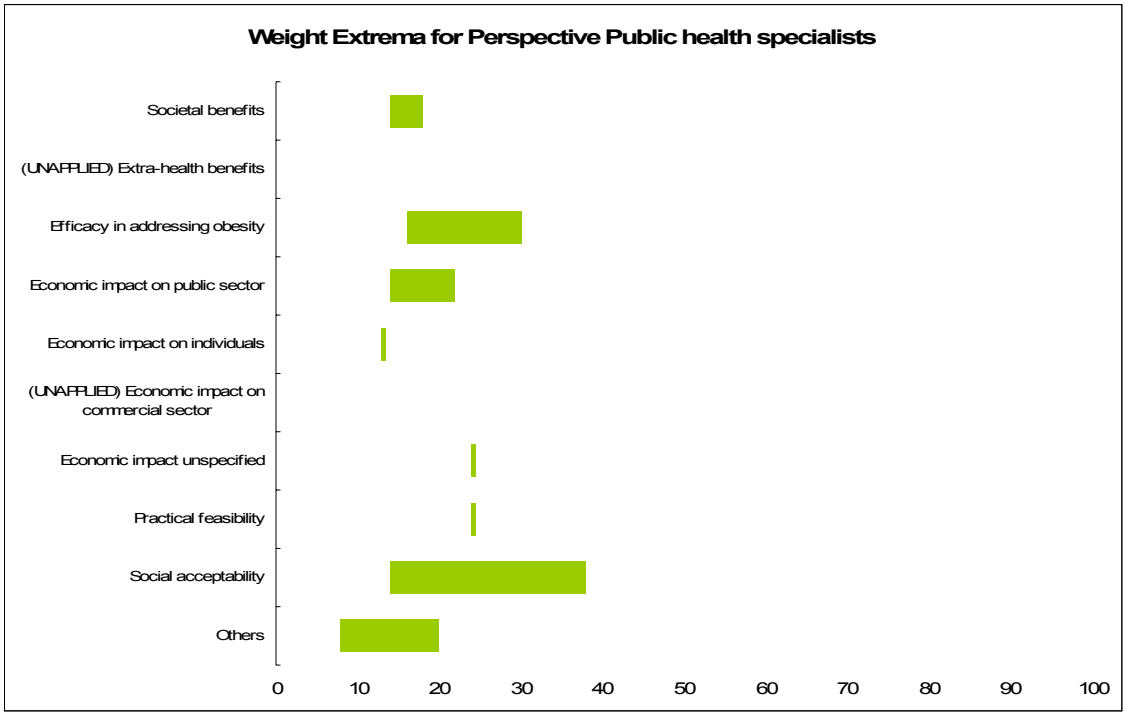
In Public Health Specialists, to which three of the interviewed ones belong to: Public Health professionals, Members of experts nutrition/obesity advisory committees and Health journalists, 18 criteria were identified, classified in eight categories of results. Thus, it became the perspective in which the highest number of average results per category of perspective was achieved.
Graph 7.In this graph appears a higher scope of priority relative values for the results based on the social acceptability and followed by the result in terms of efficacy on addressing obesity. In this first case, it was highlighted the importance for all the people interviewed that the measures should be easy, that they do not cause rejection, that they be shared and can be easily taken by the common citizen in his ordinary life. This argument is accompanied by a different aspect in relation to the other perspectives as the social inequalities in the approach to topics as obesity and nutrition.

"Current campaigns only target a particular sector of the population, which are the most powerful ones or the most receptive ones, and which use to be the most cultivated ones and with a higher economic capacity, i.e. the newspaper, who read it? Who can log in to Internet at home?" (Cat15 Expert adviser).

"Capacity of the measure to reach the majority of people from the social, geographical and economic point of view" (Cat10 Public health professionals).

" Preservation policies have to be spelled out regarding the gastronomy culture, since some groups have been more affected than others by the globalization. Obesity is a cultural uproot, it is a loss of identity, compulsive attitudes, hyper consumption" (Cat15 Expert adviser).

Graph 7.



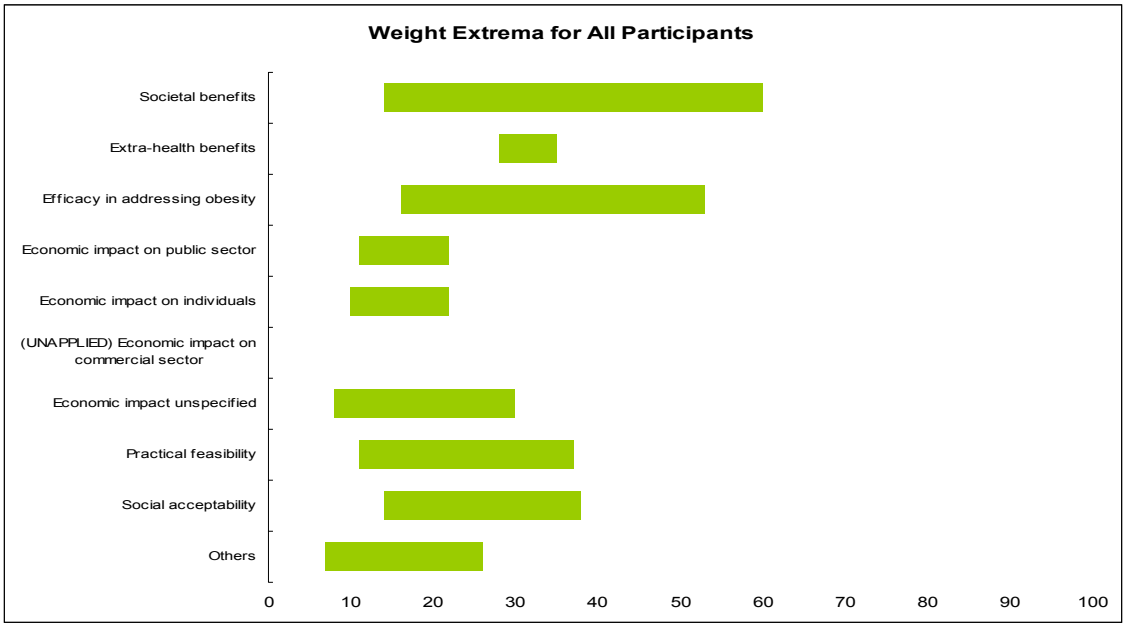
To sum up, it is clear that the perspectives that assign a higher relative value to the result on social benefits are the policy makers and the Public providers. The result based on the criterion orientated to the efficacy in addressing obesity is prioritized by the perspectives of the Public interest non governmental organisations, Food chain large industrial and commercial organisations and Large non food industrial and commercial organisations. Social acceptability was assigned a priority relative value by the Public health specialists and Small food and fitness commercial organisations.

In any of the relative values of the results grouped by perspective, it was recognized any criteria to be considered in the category of economic impact in the commercial sector and the economic impact in the individuals. It was only considered as an aspect of certain value by the perspective of Food chain, large industrial and commercial organisations.

Finally, when analyzing the results from the State's responsibility for development of actions point of view, from the administrations of global and community scope, or from the individual perspective, it can be said that in the light of the general arguments described, in the first case (general responsibility) there are the perspectives of: Public interest non governmental organisations, Food chain large industrial and commercial organisations, Public providers and Public health specialists. In the second case (individual responsibility): Small food and fitness commercial organisations, Large non food industrial and commercial organisations and Policy makers..

9.4 Description of Criteria and Results

Participants can be mixed in one single common graph, showing how weight was distributed into each result by the whole group of participants. Taking into account all the participants (see graph below), the bars show that there is relatively an agreement on the low importance of the economic impact on public sector and on the individuals. Alike with the economic impact in the commercial sector (which was not even considered), compared to the practical feasibility and social acceptability.
Results on Extra health benefits show a higher and more important agreement. It seems to be that there is a minor agreement on the importance of the criteria reflecting the Societal benefits and the efficiency on addressing obesity.



These results are reflected in the comparisons of the different perspectives shown in the series of graphs. The wide difference between the pessimist and optimist extreme for the result Societal benefits is determined by relatively high weight of the Perspective Public interest non governmental organisations, Small food and fitness commercial organisations
Furthermore, the relative importance of this result is highlighted by the weight assigned to Policy makers and Public Providers. In these perspectives differences on the valuing are clearly seen.

Regarding the criterion Efficacy in addressing obesity, this is seen by the Policy Makers Perspective in which one of the participants assigned a relative high weight, and by the Large non food industrial and commercial organisations.

Although it seems to be a consensus on the relative importance of the result on Extra health benefits, this will only be applicable to Public interest non-governmental organizations, Food chain, large industrial and commercial organisations and Public providers. The other perspectives did not prioritize the criteria related to this type of result.

To sum up, the perspectives that assign a higher relative weight to Society Benefits are the Policy makers and Public providers. The result based on the criteria orientated to Efficacy on addressing obesity is privileged by perspectives Public interest non governmental organisations, Food chain large industrial and commercial organisations, and Large non food industrial and commercial organisations. Social Acceptability received a relative priority weight by the Public health specialists and the Small food and fitness commercial organisations.
In any of the relative weights for the results grouped by perspective were included any criterion to be considered in the category of economic impact on public sector and the economic impact on individuals was only considered as an aspect of considerable weight by the perspective Food chain, large industrial and commercial organisations.
Finally, when analyzing the result from the point of view of development of actions under the State's responsibility, the global and communal administrations or from the individual perspective, it can be said in the light of the general arguments stated, that in the first case (of general responsibility)
appear the perspectives Public interest, non governmental organisations, food chain, large industrial and commercial organisations, Public providers and Public health specialist. In the second case, (individual responsibility): Small food and fitness commercial organisations, Large non food industrial and commercial organisations and Policy makers.

Section 10. Appraising option perfomance (scoring)

10.1 Introduction

This chapter shows the estimation of the results obtained by the participants in the different perspectives of each one of the options, under the individual criteria using an arbitrary scale.
For the development of this phase once the participants identified their criteria, they were asked to evaluate the relative usefulness of the different options under each one of the criteria. As mechanism of expression, the assignment of numbers was used as percentage in the different options in an arbitrary personal scale. These representations are called "punctuations"[2].

10.2 Scoring Process

The scoring reflects specific technical judgment on the relative performance of the options under individual criteria.
The participant assigned the score to each option under each criterion. A scale from 1 to 10 or 1 to 100 was selected according to the preference of the participant. The upper value is the best value and the lower one is the worst.

In this process there was a difficulty in the valuing due to different reasons ranging from the uncertainty, the possible variation from one case to the other, the circumstances or any particular assumption. This situation was made obvious by some participants:

"The most difficult part was the valuing of the criteria under the described options, it means the scoring. In some things it is very clear, but not in some others." (Cat5 Smal health food company).

"The most difficult part of the interview was to assign the scores because it forces to praise the measures and is more complicated in so far as there are some unequal technical capacity in some cases, and different analysis capacity to value them." (Cat4Food retailers)

"The most difficult part was to score under the economic criteria in so far as the opinion given under a personal criterion, affect many more variables." (Cat20 Sport NGOs)

"The most challenging were the scores because it does not depend on the participant to estimate a value. It is out of the prospective vision of the problem." (Cat2 Food processing company).

Before this situation and as strategy in this phase to acknowledge and regard these situations, the MCM process allowed the assignment of two scores for each option under each criterion.

[2] MCM Protocol for interviewer. Produced for the PORGROW Project, SPRU. 2004.

As the participant carried on with the scoring, they were was asked to clarify the reasons for their decisions in the relative valuing of the different options.
Special emphasis was given to express the "technical" justifications of their judgment. With the assigned scoring for each option under each criterion, the scoring process is the most time consuming part of the MCM process.
This development showed the wide diversity in this type of analysis and the implications of this phase with the next one. Even though this was complex for many participants, at the same time was valued in a positive way, highlighting the analysis and reflection process:

"The best part of the process was to notice the complexity that can be implied in the establishment of some criteria to value possible options. What the participant considered most difficult was to establish the criteria and scoring because many possibilities came to his mind and he got confused. He had not understood that he had to define them by himself and thus, the scoring took him by surprise because many variables of analysis take place" (Cat16 Health journalist)

"The most enjoyable part was the assignment of scoring. This is quicker and less demanding." (Cat17 Advertisers)

"The most difficult part in his opinion was to decide on the aspects where he has little experience or little evidence, as well as in the phase of criteria". (Cat15. Expert adviser)

The execution of the interview is excellent. May be it takes too long "more could be done in shorter time, but that would be worse". (Cat18. Pharmaceutical company).

10.3 Valuing process for each option.

The results obtained in the scoring for each option can be seen in tables XX Y XY. Following there is the valuing as a whole for the different groups.

A. Options Exercise and phisycal activity-oriented

Option 1. Change planning and transport policies

- Public interest NGOs

This is an option considered positive by this group and which has multiple benefits in an integral way not only from the health point of view, but also on different aspects as the environment, pollution reduction, political willigness, labour activity, time, urbanistic, etc: *Public health starts in the organization of the territory: distributing spaces and acknowledging needs and problems. (Cat21 Trade union)*

- Food chain, large industrial and commercial organisations

Although this is not the option with the upper score, overall it could be said that there is a preference in this group towards this type of policies, of which some benefits seems to be obtained in different aspects:

"It is a main policy to favour the mobility by public transport. In the specific case of the big cities it avoids the sedentary life. The transport policy has to be taken into account: there are many people who do not get out of their own cars". (Cat1 Farmers)

"Urban life affects very much security, especially in a society where the woman plays the role of baby sitting, and if there are not natural and open surroundings where she can feel safe, this affects her". (Cat3 Large catering company).

However, there are also limitations due to geographical difficulties, time and the cost of implementation which negatively affect the score obtained.

"There are things that are possible in some places, and others that are not. In Spain the same diversity of the structural territory makes it very difficult to make an urban design and transport policy." (Cat4 Food retailers)

"The public institutions do not budget how to improve the public transport, this is not going to help to solve obesity." (Cat2 Food processing company)

- Small food and fitness commercial organisations

This option is badly seen by the members of this category who seem to base their opinions on the group's dynamic and their contradictions. Hence, they give this option few possibilities to positively impact the problem. This result calls the attention due to the work areas grouped in this perspective:

"These types of campaigns make it difficult commuting of the population in the big cities because it is difficult to put into practice and they are changes that affect the rest of the population and not only the obese ones." (Cat5 Health food co.s).

"We people are very lazy, although we have been asked to use once a year public transport and make a day without car, this is a failure. We are not able to do that."(Cat13 Commercial sports co.s).

- Large non-food industrial and commercial organisations

Although the arguments expressed here seem to show a very low conformity with the performance, the results of the score as a whole show a wide variability in the performance of such:

"It would not have any incidence either would it be feasible. Obesity depends on many things not only sports, but also on the sports facilities availability. (Cat18 Pharmaceutical company). In Spain almost everyone drives his car "we have

bad habits", transport policy is very centralized, people do not walk or ride bikes." (Cat12 Life insurance company).

- Policy - Makers

The importance of the social aspect from a democratic perspective, and the capacity of the measure to influence the individual, are the main rationales arguments reflected in the reflection of the members in these groups and justify their pessimist score about changing planning and transport policies:

"It does not pay attention to the social habits in any collective in particular due to its various alternatives. An older person does not use to have choices; a "white-collar" person is not affected, and the "blue collar" (manual workers) do not have a choice. The capacity to influence is much diluted."
(Cat9 Finance ministry offcial).

"Citizens do not participate in any decision and do not promote changes in their lifestyle." (Cat8 Healht ministry official).

- Public Providers

The multiple connotations of this option make it to be badly valued by the participants in this group:

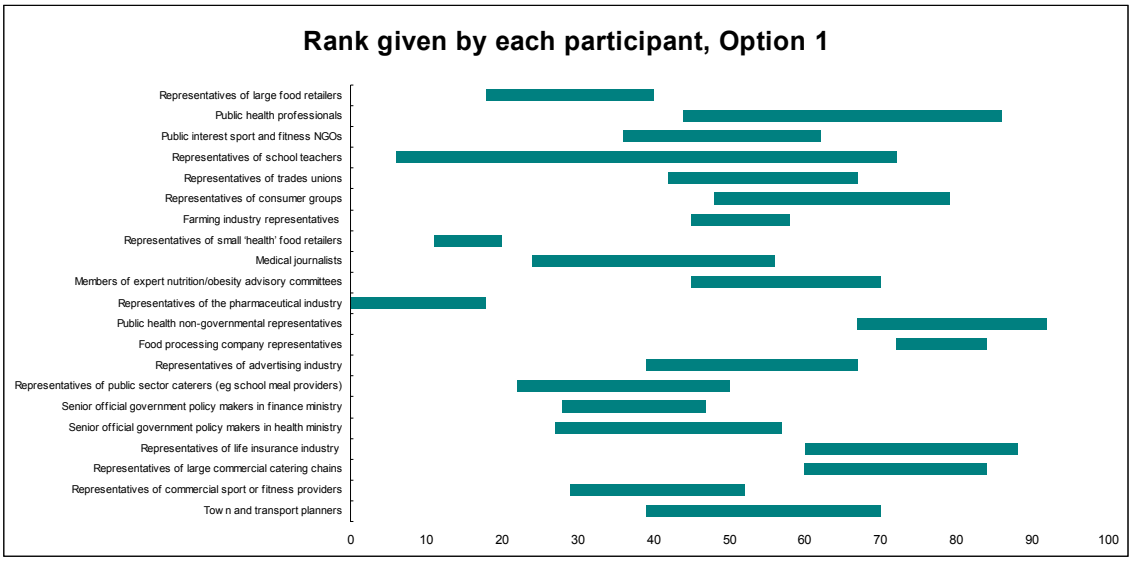
"It implies changes in many habits of life, culture and economy of the society. Considering that multiple public institutions take part with opposite interests, and the urban current reality, it is something very difficult to change." (Cat14 Teachers).

- Public health specialists

Although the benefits of this type of policies are acknowledged, the considerations on the political interests, the temporary space, etc, place the scoring of this option as a whole in a middle point of the scale.

"Policies are made but their implementation never reaches 100%. There are too many economic interests regarding the cars policies to finally reach the population and be implemented, despite how highly it can impact in the reduction of obesity. " (Cat10 Public health professionals)

Graph 10.1 Upper and lower ranks for the option *Change planning and transport policies.*



Option 2. Improve Communal Sports Facilities

- Public interes NGOs

Although in scoring group terms this option is positively valued, the expressions about it show little conviction of its performance: "*citizens have many difficulties to do physical activity." (Cat21 Trade union), "This is more a personal measure with more individual factors only related to health. It does not have other factors" (Cat19 Public health non-governmental representatives).*

- Food chain large industrial and commercial organisation

In this part, the participants acknowledge in the different social type aspects and the current family lifestyle, the main motivators for the implementation of this type of policy.

"Children are in trouble since the hour they leave the school until their parents return from work, and they do not go out because there are not public areas for that. There is not security and by not having available areas they do not do any exercise. Therefore, infant obesity raises." (Cat3 Representative of large commercial catering chain).

"…In the current society where mothers and parents work, it is complicated to make something to favour sports. Therefore, rather than concentrating in the sports activity on weekends, this should be almost a daily activity for little children, at home, in the schools, etc.." (Cat1 Farming industry representatives).

"This is more a matter of burning the fat we eat rather than eating little" (Cat2 Food processing company)

- Small Food and fitness commercial organisations.

This is an option pessimistically valued by this group: "*people who do exercise are precisely those who have fewer problems of obesity." (Cat5 Representatives of small "health" food retailers).*

- Large non-food insdutrial aand commercial organisations

Contrary to the findings for the other options orientated to the practice of sports and physical activity, in this case different reasons are shown which make that this option be regarded as a priority: "*This is something good for everybody, including for other policies different to the obesity ones." (Cat18 Pharmaceutical industry). "Forbid people to eat what they like is very difficult. Hence, efforts should be concentrated in facilitating the practice of sports once people are aware about the need of them." (Cat17 representatives of advertising industry).*

- Policy makers and Public providers

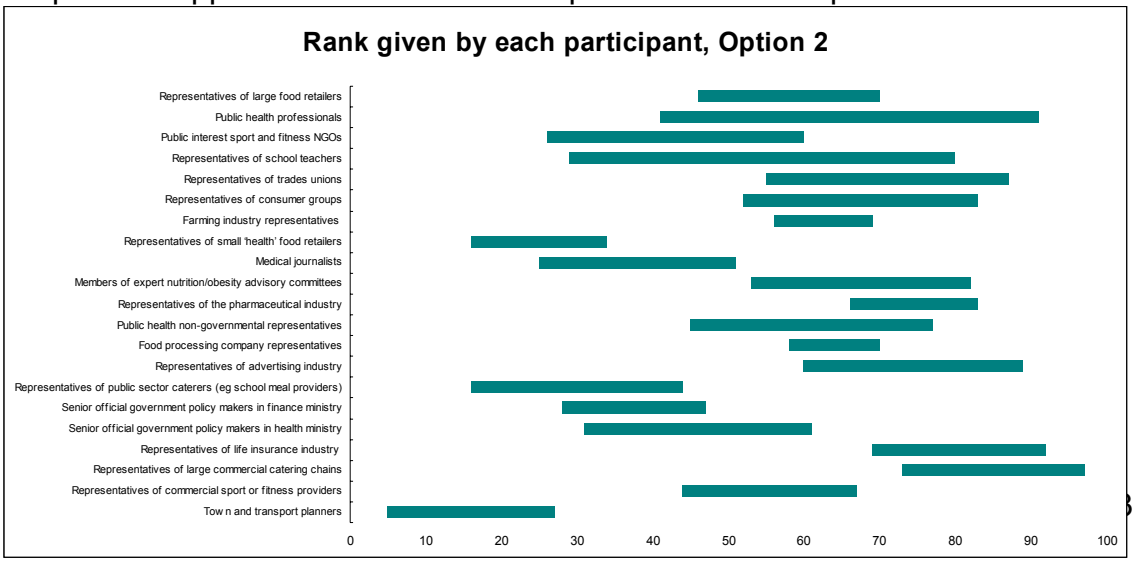
The access difficulties caused by non-money costs as the time available and the working hours, as well as the influence on the lifestyle, are the reasons to justify the low score of this option.
"Ownership is not achieved due to labour and time problems." (Cat6 Representatives of public sector caterers)

"Improve the sports facilities without dealing with the culture will not reach a good use of them, and thus they will not be useful, there will not be the expected results with these facilities." (Cat14 Teachers).

- Public Health specialists

The global optimist score in this option is justified by clear arguments: "*physical exercise is a crucial element for the weight control." (Cat16 health journalists). "There is evidence that when affordable and suitable facilities are around, it is likely that people go there…" (Cat10 Public health professionals); "Particularly in infants it has been shown that this availability is efficient in the reduction of obesity, as well as for the toxic drug users and other social programmes" (Cat10 Expert adviser).*

Graph 10.2 Upper and lower ranks to improve communal sports facilities.



Option 20 . Increase the availability an d use of pedometers or other physical activity monitoring devices, with physical activity targets.

- Public interest NGOs and public providers.

Although this option was taken back by some of the participants (sports NGOs representatives, and public sector caterings) a medium – low rank score was assigned and there was not any comment regarding it.

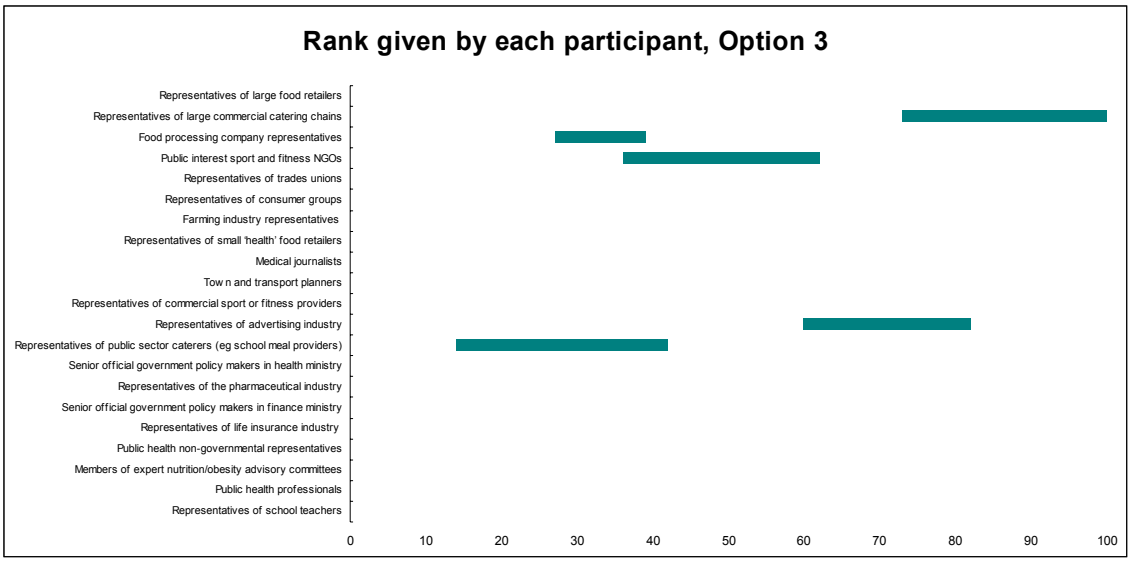
- Food chain large industrial and commmercial organisations.

Despite the fact that in group this was positively valued, there is a wide variability in the score assigned.

- Large non-food industrial and commercial organisations.

This option was selected by the representative of the advertising industry who assigned it a positive score.

Graph 10.3. Upper and Lower ranks for the option *Increase the availability and use of pedometers or other physical activity monitoring devices, with physical activity targets.*



B. Modifying the supply of and demand for foodstuffs.

Option 4. Controlling sales of foods in public institutions

- Public interest NGOs.

This option gets a medium score that is justified by the inefficiency of the control measures when they do not have people's support.

"People's will, depend on every one. (Cat7 Representative of consumer groups). "This is an important measure but is not feasible because food

consumption cannot be controlled from the public administration. This is a measure that must be accompanied by other factors as education. If the machine is controlled, but not the availability in the area, nothing has been done. " (Cat19 Public health non governmental representatives).

- Food change large industrial and commercial organisations

"It is less important to control the sales because by limiting or prohibiting the problem is not solved." (Cat1 Farming industry representatives)

"The cost of the measure is very low for the institutions and companies involved, they can replace the products for sale by others, avoiding loosing competitiveness. This is not a very relevant measure because the impact on the problem is little, however, it has other highlighting conditions." (Cat 4 representatives of large food retailers)
"The prohibition of the consumption is not a good measure, it limits the individual freedom, and it is good that the State tries to improve it, but the freedom is a right above certain prohibitions, specially in the food consumption. It should go for "more information and less prohibition" . (Cat 3 Representatives of large commercial catering chain)

- Small Food and fitness commercial organisations.

"In reality people buy products out of the public places. This policy does not limit the sale of these products and therefore their consumption is not affected. " (Cat 5 representatives of small "health" food retailers)

"Once the sale is controlled, freedom of choice is being penalizad.. "(Cat 13 representatives of commercial sport or fitness providers)

- Large non- food industrial and commercial organisations

"Restrictive measures on consumtion has no future. "(Cat 17 Representatives of advertising industry)

"It is a legal decision and depends on the political willingness". (Cat18 Representatives of pharmaceutical industry)

- Policy - Makers

"First this a measure that depends on the government, there is nothing to agree on, either to subsidy, or motivate: Preach with the example; third: serves to condition the access" (Cat 9 Finance ministry offcial).

"By developing this action in the public schools, it will have an inmediate impact on infants." (Cat 8 health ministry oficial)

- Public Providers

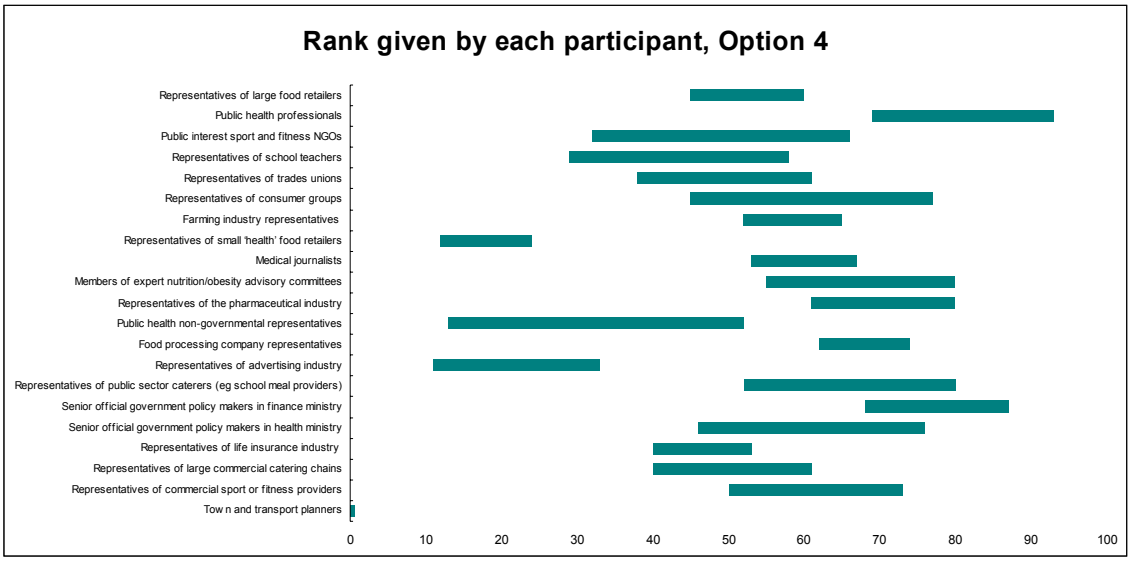
No comments on this initiative

- Public Health specialists

"Most of the meals do not take place in public institutions." *(Cat 16 Public health professionales*)

"Effectiveness can be very important in so far as the child has fewer options and the cost is relatively low." (Cat15 Expert adviser)

Graph 10.4 Upper and Medium Ranks for the option *Controlling sales of foods in public institutions*



Option 6. Subsidies on healthy food

- Public Interest NGOs

"Nothing is going to have subsidy, it would be disloyal competition and would not be admitted in the market" (Cat 21 Trade union)

"Through a certain economic policy is not possible to influence eating guidelines". (Cat7 consumer representative)

- Food chain large industrial and commercial

"Subsidies refer to products and what produces obesity is the diet." (Cat2 Food processing company).

"The option of subsidies is not the best way to promote an activity. It is not coherent because not the most expensive food is the healthiest one, and precisely it is a matter of defining a proper diet. This option should be changed by foment through public help or subsidies for research in the promotion of healthy help, new products more than subsiding existent ones". (Cat4 Representatives of large food retailers).

- Small food and fitness commercial organisations

"It is better to support what is positive, the subsidies, the good faith, be able to support this type of campaigns, award a certain way of businesses that adjust themselves to a series of diet patterns." (Cat5 Representatives of "health" food)

- Large non-food industrial and commercial organisations

"Interventionist policies do not use to be good, it is difficult to put a limit to foods regarding health. "(Cat18 Pharmaceutical company)

"Healthy food is not expensive in Spain and it has been proved that affordable prices have not promoted consumption" (Cat 12 Representative of life insurance industry)

- Policy makers

"Subsidies are favourable fiscal policies, but they are not a general strategy to approach the incentive of good food healthy habits "(Cat 9 Finance ministry official).

"By reducing the price of a product, access is favoured, but not the awareness before the product. If you are not aware, even though it is cheaper, you do not get the expected results". (Cat 8 Health ministry official).

- Public Providers

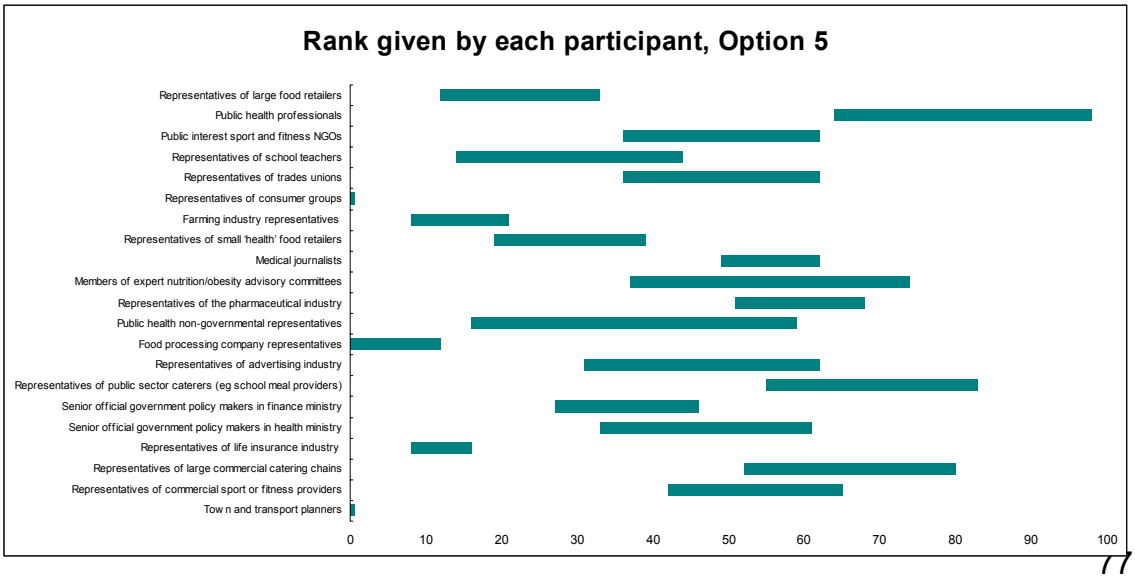
"Do not change anything because they lie on the food producer and indirectly on the consumer, but not on the culture, but on the economy" (Cat14 Teachers)

- Public Health specialists

"The price reduction of some products traditionally available and healthy would be welcome by the population. Healthy foods in Spain are not rare in our traditional costumary diet." (Cat 16 Health journalists)

"In general, policies that make that the healthiest behaviour be easier to choose, have more impact." (Cat 10 Public health professionals)

Graph 10.5 Upper and lower ranks on the option *Subsidies on Healthy Foods*



Option7. Taxes on obesity-promoting foods.

- Public interest NGOs

"It does not consider that certain foods and damage are socially accepted. This would be related to the variability of the person." (Cat21 Trade union)

"It is very difficult that fiscal changes alter the pattern of consumption and thus produce changes in habits." (Cat7 Representatives of consumer groups)

- Food chain large industrial and commercial organisations

"Taxes as well as subsidies are coercitive means which do not have any incidence." (Cat1 Farming industry).

"Fiscally penalize the fats as it looks, it is necessary to eat between 15-20%, then what is going to be penalizad? The normal food? It all depends on the quantity to eat"(Cat2 Food processing company).

"The taxes option is considered a "scribble" totally incompatible with the policies of foment of growth in this food market and the free market on which the EU is based "(Cat4 representatives of large food retailers).

- Small food and fitness commercial organisations

"Penalizing the most appealing food would be negative for the population, negative for everybody and particular for the population and the consumption would not decrease." (Cat5 Representatives of small "health "food retailers)

"Every one is free to shop and choose the product he likes, people have the capacity to know what to choose or not..?" (Cat13 Representatives of commercial sport or fitness providers)

- Large non-food industrial and commercial organisations

"Policies of liberty restriction are overcome by the market "(Cat17 Advertising industry).

"Expensive food do not limit or prohibit its consumption, it could even be "fashionable", prohibition appeals mainly to young people" (Cat12 Life insurance industry).

- Policy makers

"Taxes is not an adequate measure because it makes people get the message that there are good and bad foods. It is better to educate the population about some foods that they can eat generously and others with moderation, but not penalizing with taxes according to this classification." (Cat8 Health ministry official).

"People do not see the higher cost implied by taxes regarding an expected benefit of a reduction of a dangerous consumption. "(Cat9 Finance ministry official)

- Public Providers

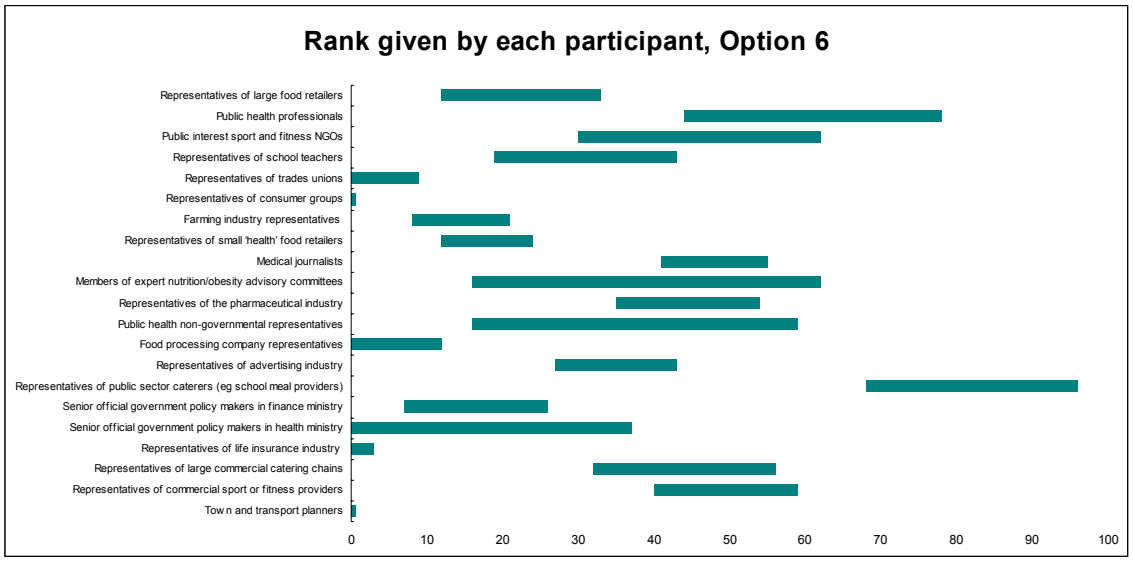
"As a matter of fact whatever is dangerous for the health should be penalizad, this way unhealthy products will not be favoured. "(Cat6 Public sector caterer)

- Public Health Specialist

"It means an additional cost and therefore is not well received or accepted." (Cat16 Health journalists)

"Obesity-promotting foods are usually cheaper, therefore only the cost of purchase increases, shift the parchase of foods to others more expensive."(Cat15 Expert adviser)

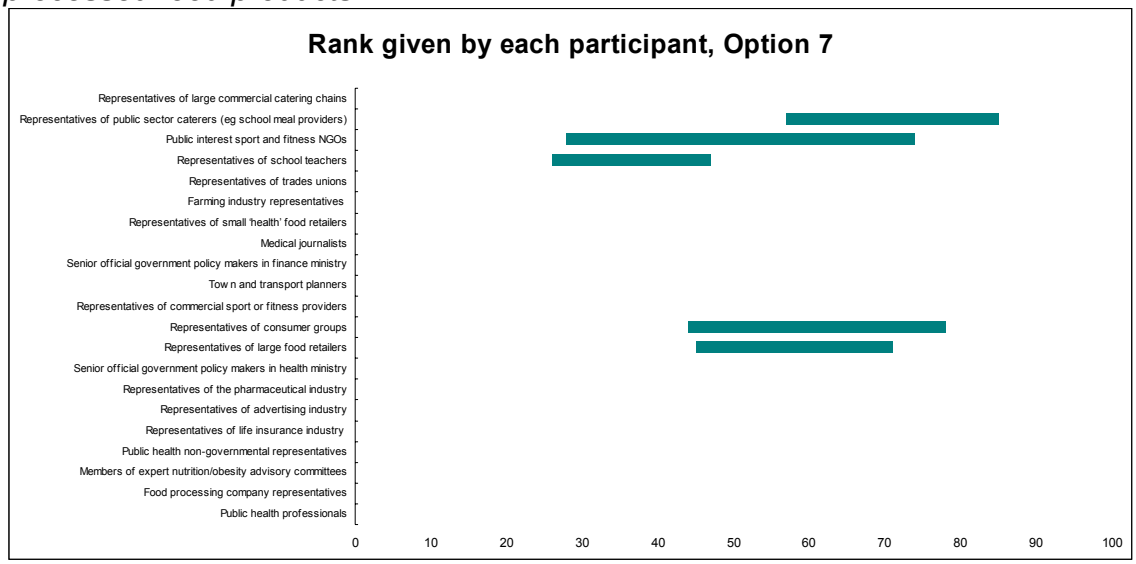
Graph 10.6 Upper and lower ranks for the option *Taxes on obesity-promoting foods.*



Option 11. Controls on composition of processed food products

"It very much depends on how this measure is used. Control should aim to improve information and secure the coherence of the labeling and composition, however, there are huge technical difficulties in setting the maximum / minimum or "adequate" medium limits in the composition of each one of the foods alimentos." (Cat4 representatives of large food retailers)

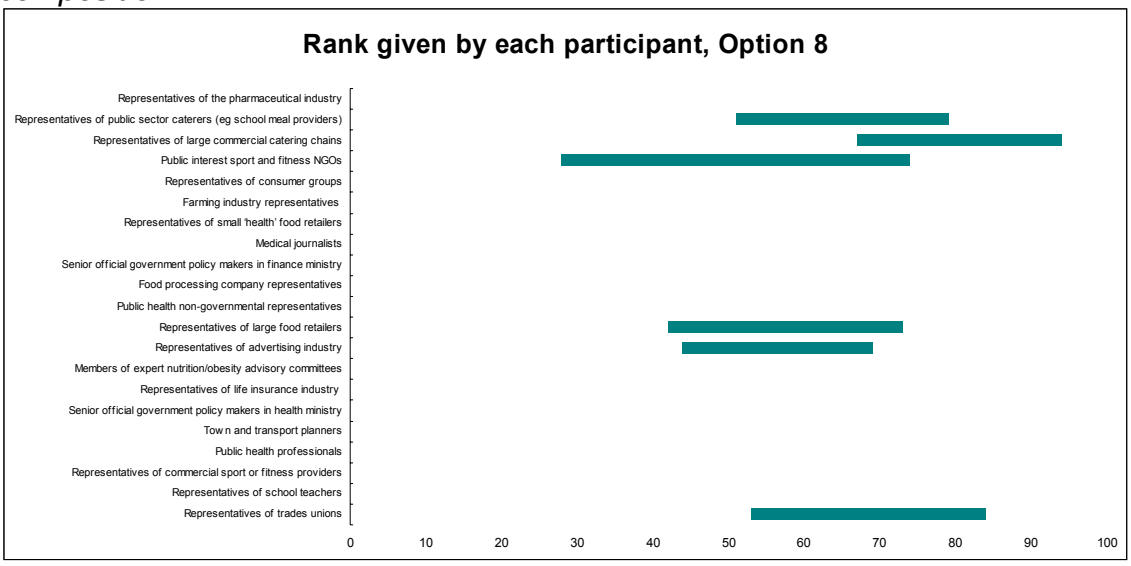
Graph 10.7 Upper and lower Ranks for the option *Controls on composition of processed food products.*



Option 12. Incentives to improve food composition

Any of the participants in the different groups made any comment on this initiative.

Graph 10.8 Upper and lower ranks for the option *Incentives to improve food composition*



Option 14. Encouragement and incentives for caterers to provide healthier menus.

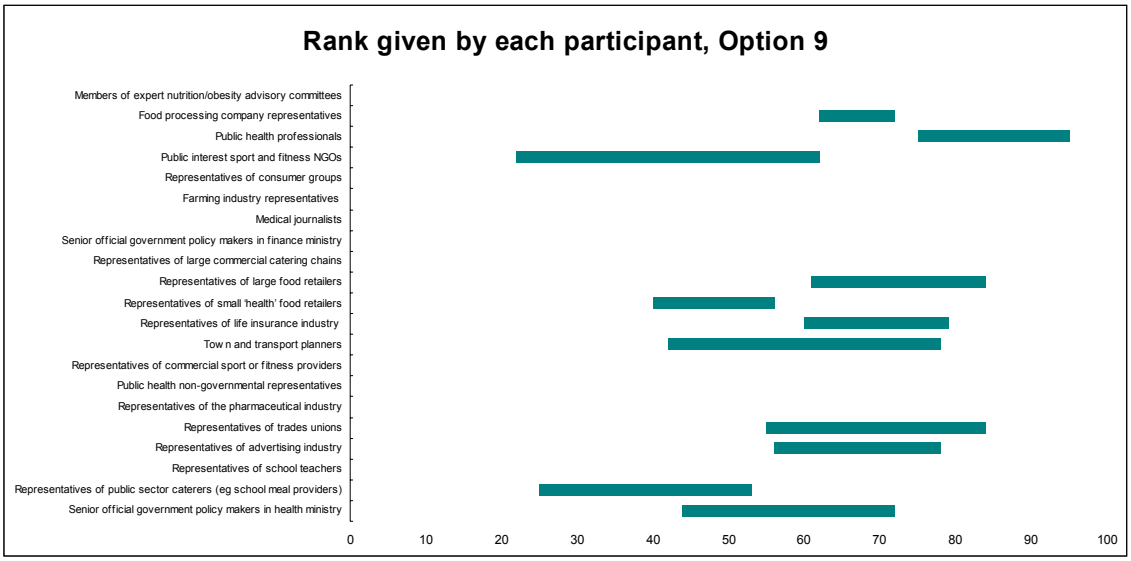
"Currently, manufactured products are easier to be used by families, and thus the consumption is higher." (Cat20 Sports ONGs)

"To be coherent, in the case of the Spanish market campaings on products served per rations should be forbidden, to serve more for the same price, people actually buy per unit, but if the advertising offers the same price for more quantity, this favours obesity." (Cat2 Food processing company)

"This is not complicated, only needs to define the menu, its exigencies and make the caloric and other necessary adjustments to make more balance menus, it not difficult at all.." (Cat5 Representatives of small "health" food retailers)

"It should not be expensive, it is a matter of design and this represents cost, food served to children at schools should not cost more, but it could be better designed, it is a matter of election or design of the menu" (Cat17 Advertising industry)

Graph 10.9 Upper and lower ranks for the Option *Encouragement and Incentives for caterers to provide healthier menus*



C. Informational initiatives.

Option 5. Mandatory nutritional information labeling

- Public Interest NGOs

"Different to children, adults should be able to choose based on adequate information, summarized and easy to interpret. The market makes this aspect difficult because the information provided is difficult to be interpreted, is very little and complex." (Cat21 Trade union)

"It is complicated to define "healthy foods", there are not bad foods by themselves." (Cat7Representatives of consumer groups)

"The information labeling without education does not help at all…"(Cat 19 Public health non governmental representatatives)

"Few people pay atencion to the information labeling.""(Cat 20 Sport NGOs)

- Food chain large industrial and commercial organisations.

"It does not help ibformation labeling if there is not an education" (Cat 21 Farming industry representative).

"The labeling does not benefit the community, without previous information about the meaning of each concepts, it is in vain to put much information, because the effect can "scare the consumer"."(cat 3 representatives of large commercial catering chains)

- Small food and fitness commercial organisations.

"*The labeling interpretation requires more knowledge by the subject.*" (Cat 5 representatives of small "health" food retailers).

- Large non-food industrial and commercial organisations.

"The intake would be good or bad based on the quantity we have of this product ando n the rest of the products that form part of the diet." (Cat17 Advertising industry)

"It is positive for all the sectors and all the administrations with a big influence of al"l (Cat18 Pharmaceutical industry)

"*The control measures by their legal character are going to last along the time, and if they change always will it be for better.*." (Cat12 Life insurance industry)

- Policy makers

"The traffic light is a simplification that can be interpreted as a way to access big groups, but as all simplifications it can cause opposition for being benign, therefore, mandatory nutritional labeling yes, but not through a traffic light that is more arguable for being too gross and childish. " (Cat9 finance ministry official).

"*Consumers must have information on the content of the products, but not simplifying it so much as to establish the food categories in good, regular and bad."* (Cat8 Health ministry official)

- Public caterers

"Labels are good to a certain extent in so far as people do not take time to read them and in many cases the content is disguised." (Cat6 Public sector caterer)

"There are not good and bad foods, but diets can be well or badly balanced." (Cat11 town and transport planners)

"We see the products by their package, how atractive they look, not by their composition" (Cat14 Teachers)

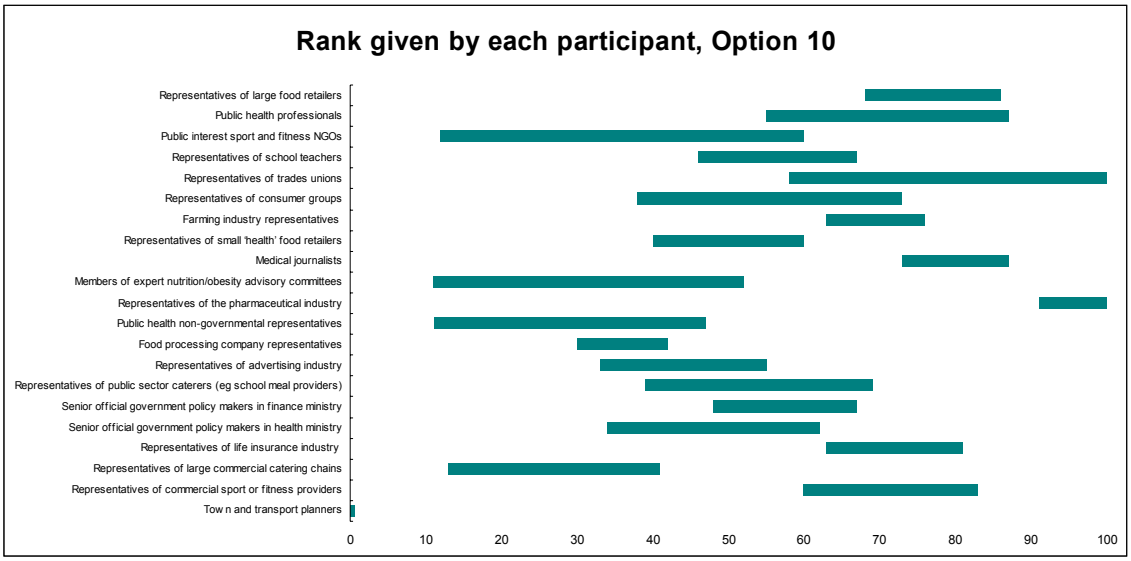
- Public health specialists

"Little attention is paid to the nutritional information provided on the labels and furthermore they are not easy to understand. The wide range expresses that if things are well done can have much influence." (Cat16 Health journalists)

"The EU's laws on labeling are generating many problems, that adding this option would cause a decision only in 4 to 5 years time. Labeling is always behind the needs or the current problems. "(Cat15 Experts adviser)

"Information "alone" has cost zero." (Cat10 Public health professional)

Graph 10.11 Upper and lower ranks for option Mandatory Nutritional Information Labeling.



Option 3. Controls on food and drink advertising

- Public Interest NGOs

"Advertising would have to be restricted based on the quality criterion and this would not be allowed by the market, however an agreement on good practices could be reached." (Cat21 Trade union)

"Advertising in itself is educational, it promotes habits and behavioural changes regarding consumption."(Cat19 Public health non-governmental representatives)

"Advertising can confuse and cause wrong ideas regarding what is a healthy food, it influences the consumption habits and the creation of myths or misleading ideas regarding a balance diet, over all it causes a major effect in the young population." (Cat7 Representatives of consumer groups)

- Food chain large industrial and commercial organisations.

"Advertising is very Clever, it always goes ahead the administration and always finds ways to cheat." (Cat1 Farming industry)

"Advertising must be controlled, but not what it is to control about it, it is necessary to emphasize that any type of food that is advertised, has to be interpreted within the context of the daily consumption. Ignorance on this topics is big and advertising, which is the information source of many people, is controversial and impartial." (Cat2 Food processing company)

- Small food and fitness commercial organisations

"There is misleading advertising and this confuses a lot the population, everyone takes advantage to use it as beneficial for beauty, esthetic and mix it all.." (Cat5 Representatives of large food retailers)

"It is a legislative law and is at zero cost for the person. "(Cat13 Representatives of commercial sport or fitness providers)

- Large non-food industrial and commercial organisations

"Policies orientated to control the energy consumption based on the adoption of decisions that limit the appearance or consumption of these products, besides being opposite to the own evolution and the freedom of the enterprises and consumers, are little efficient and consumers in the long run are going to break them, for what they should not be the focus of attention." (Cat17 Advertising industry)

"Nobody is guilty regarding obesity, nobody should be blamed. When all products are good or bad depending on the dosis or other medicine, it is very complicated to asses which products or foods would have to be controlled." (Cat18 Pharmaceutical industry)

- Policy Makers

"It does not promote any other type of measures that contribute to obesity." (Cat8 Health ministry official)

"The higher classes react better to the life styles than the low classes, conditioned by a better acquisition capacity." (Cat9 Finance ministry official).

- Public providers

"There is little what the community can do in this field, the only thing it can do is to put a claim, in fact there is a certain conformity with this." (Cat6 Public sector caterer)

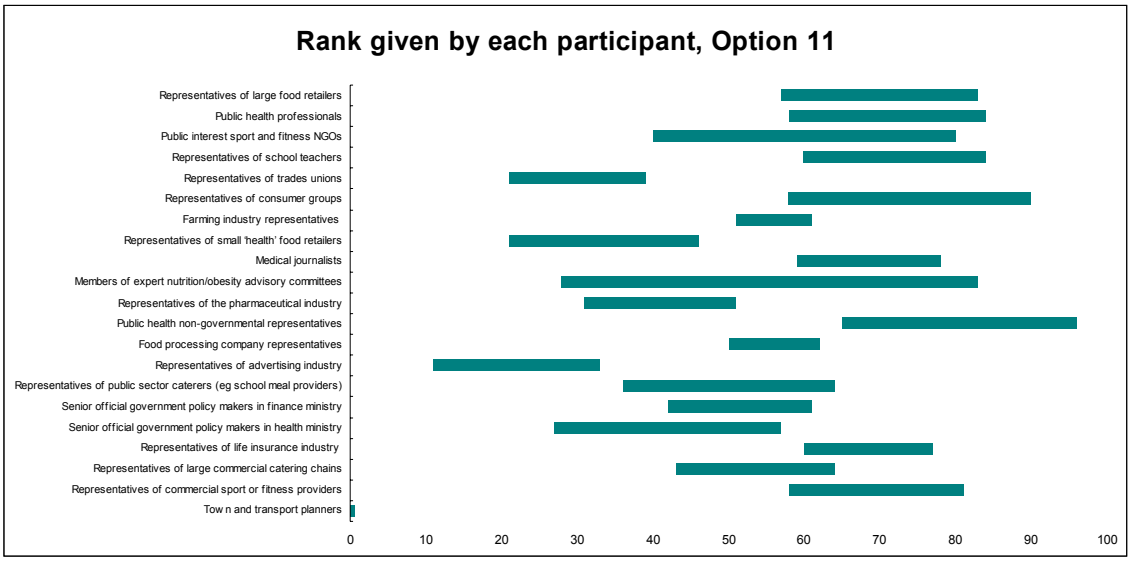
"It implies payment to inspectors to the different levels although the implementation in ittself is cheap. The laws imply the payment of an inspection system." (Cat14 Teachers)

- Public health specialists

"This option would create more controversy, particularly by the industrial sector, although the population might accept it. There are many difficulties for its acceptance." (Cat15 Expert adviser)

"Advertising, the telesivion, everybody watches it, and this makes that if unhealthy foods advertising is prohibitted, the same rule would be applied to everybody, However its impact in the obesity reduction would be minimal." (Cat10 Public health professionals)

Graph 10.12 Upper and lower ranks for option Controls in foods and drinks promotion and advertising



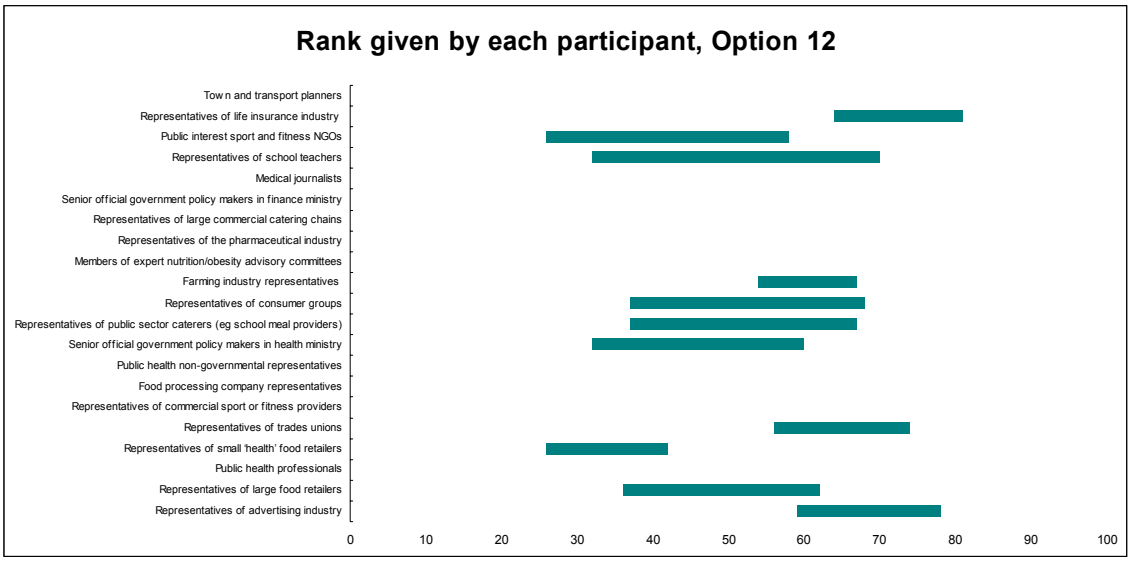
Option 19. Contol the use of marketing terms such as "diet", "light", "lite"

"These products are target to persons with specific problems or who worry about their weight and do not have much influence in other type of pathologies." (Cat7 Representative of consumer groups)

"There are many people who consume these products, because by the use of these terms, such products are considered healthy, as in the case of "light"." (Cat12 Life insurance industry)

"It is easy to make but this implies a network of people to control this all" (Cat14 Teachers)

Graph 10.13 Upper and lower ranks for option Control the use of marketing terms as "diet", "light", "lite"



D. Educational and Research Initiatives

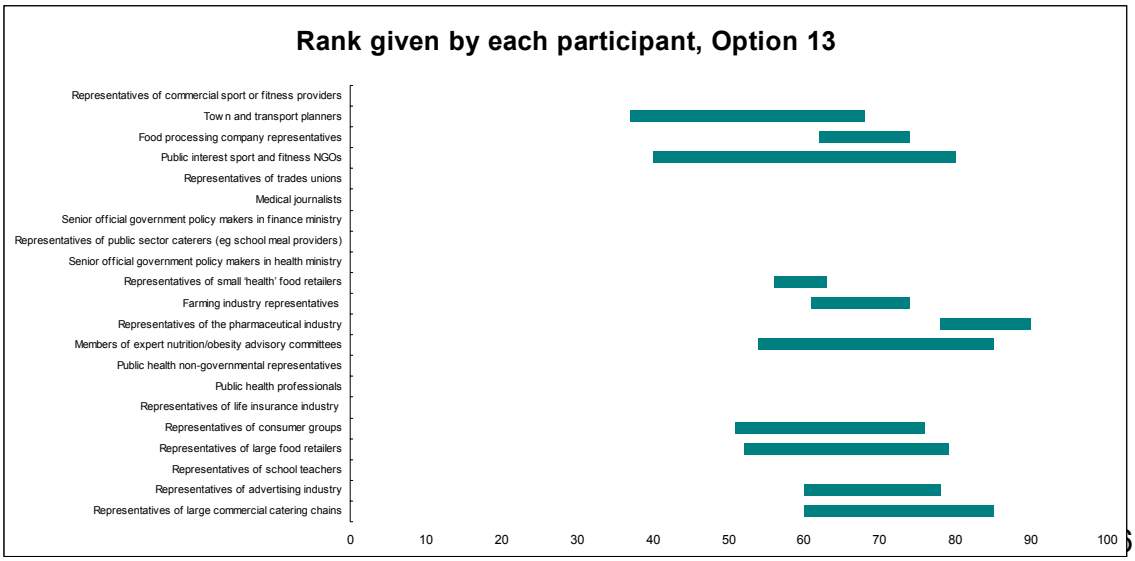
Option 8. Improve training for health professionals

"Health personnel should deliver adequate health advices, orientated to the health of the population in general, not only to the obese ones." (Cat7 Representatives of consumer groups)

"…By becoming prescriptors, family doctors orientate the consumption in a certain way and therefore influences the prices.." (Cat1 Farming industry)

"The Health profesional is closer to the patient and if he is web informed and trained will help to raise awareness and disemínate information on health problems to his patients". (Cat5 Representative of small "health" food retailers)

Graph 10.14 Upper and lower ranks for the option *Improve training to health professionals*



Option 10. Improved health education.

- Public Interests NGOs

"In adults education does not particularly help. What is intended with a public health campaign is to inform with the objective to change the perception to change the atittude, but in this case the education just reaches the first level: inform, and in better cases, it achieves to influence the perception of the risk, but it rarely achieves a change of atittude." (Cat21 Trade union)

"To change the problem of obesity in the long run, it is hended to change people's mind."(Cat7 Representatives of consumer groups).

"It has low costs and in all the sector there is a tradition to foment aspects that favour this project in general, to make it feasible." (Cat20 Sport NGOs)

- Food chain large industrial and commercial organisation.

"The best educate the consumers, the best able they will be to choose healthy foods and distinguish the less healthy ones. There is no need to stop consuming a product, but just diversify." (Cat1 Farming industry)

"This is the key in the capacity of election of the consumer regarding the adequate diet and at the same time, it is the goal towards which the fight against obesity has to head. Overmore, here is where there is the major work to do, this is what implies a major change regarding the situation in which we are currently." (Cat4 Representatives of large food retailers)

"If society know how to have a healthy life, the set of measure that technicians want to introduce will be more beneficial."(Cat3 Large commercial catering chains)

"To improve the awareness raising information on the problem is needed." (Cat2 Food processing company)

- Small food and fitness commercial organisation

"People have wrong information or nutritional information due to the advertising and to erroneous concepts, people have strange ideas, special manic, a diverse information but very confusing at the same time…, there are different opinions, there is such a diversity of concepts that there is a sort of "mental pastry". " (Cat5 Representative of small "health" food retailers)

"The most cultivated people are, the widest capacity of election, wider criterion." (Cat13 Representatives of commercial sport or fitness providers)

- Large non-food industrial and commercial organisations

"t does not help not being obese but having unhealthy habits as bad as it, and therefore it has to be global, from the school, parents, educators, citizens on

foot, promote a culture of good food, global design of education in healthy habits." (Cat18 Pharmaceutical industry)

"The widest the knowledge of a person on nutritional composition of the foods and its incidence in his health and his daily life, the higher level of awareness it will produce in him regarding the problem of obesity." (Cat12 Life insurance industry)

- Policy makers

"What is lacking in the group of basic options is the educational policies targeted in particular to children.." (Cat8 health ministry official)

- Public providers

"There is a lack of dissemination of information on obesity." (Cat6 Representatives of public sector caterers)

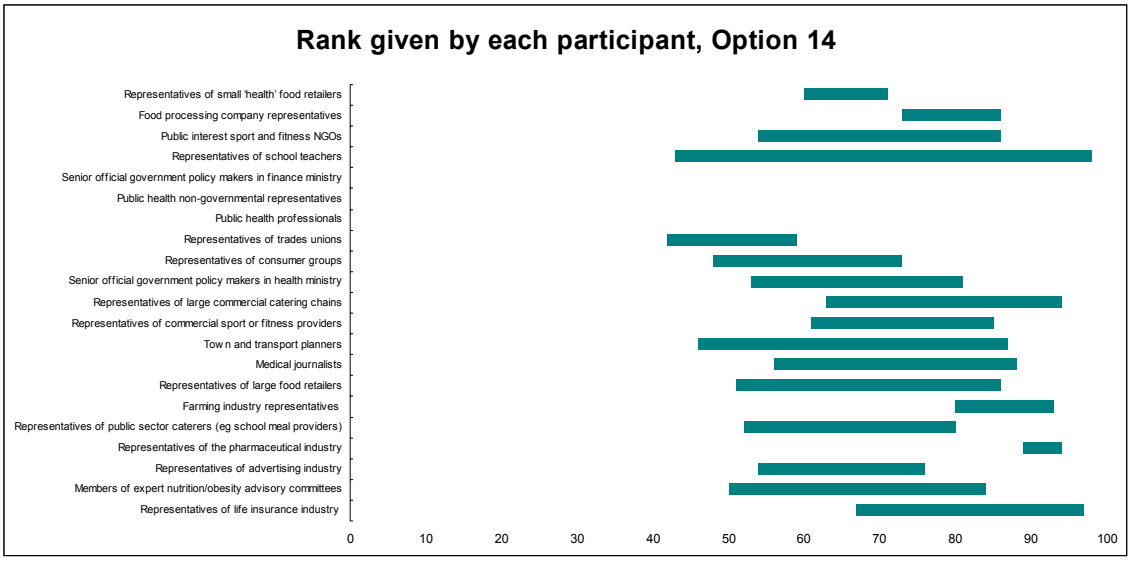
"The State, family media participates, that is why this is not so complicated. Education is delivered not only in the school, also in the family." (Cat14 Teachers)

- *Public health specialists*

"Know what to eat and know the risks of obesity is a fundamental way to avoid and control the problems of overweight. With more education, it will be possible o have citizens make better elections." (Cat16 Health journalists)

"To sum up and in the global context, sanitary education should be centre on promoting a balanced food as the Mediterranean one, and the importance of physical activity in the care and promotion of health." (Cat15 Expert adviser)

Graph10.15 Upper and lower ranks on Improved Education in health



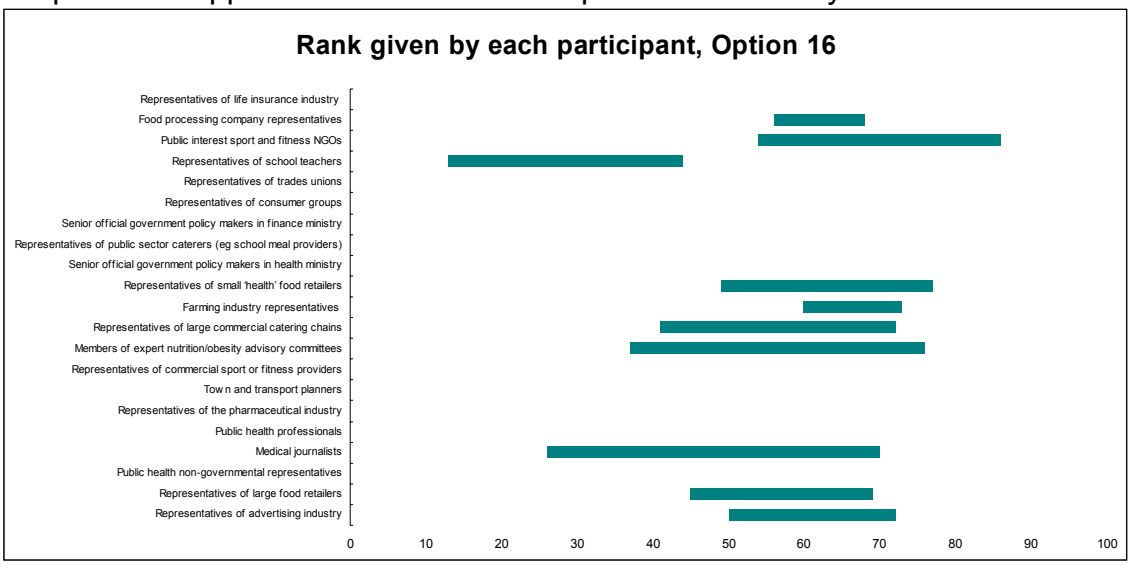
Option 13. More oObesity research

"This option has the difficult of the time period associated to the obtainment of results expected by the research, which adds certain uncertainty regarding the other criteria. " (Cat4 Representative of large food retailers)

"In fact, if there were more research into obesity, from which good public health campaigns derived, the incidence of obesity could be reduce, as well as the expenses on health. In the long run this is the option that would make more savings in the health expenses. ." (Cat5 Health food co.s)

"Research into obesity not only medical but biomedical not only political and social " (Cat16 Health journalists)

Graph 10.17 Upper and lower ranks for option More obesity research.

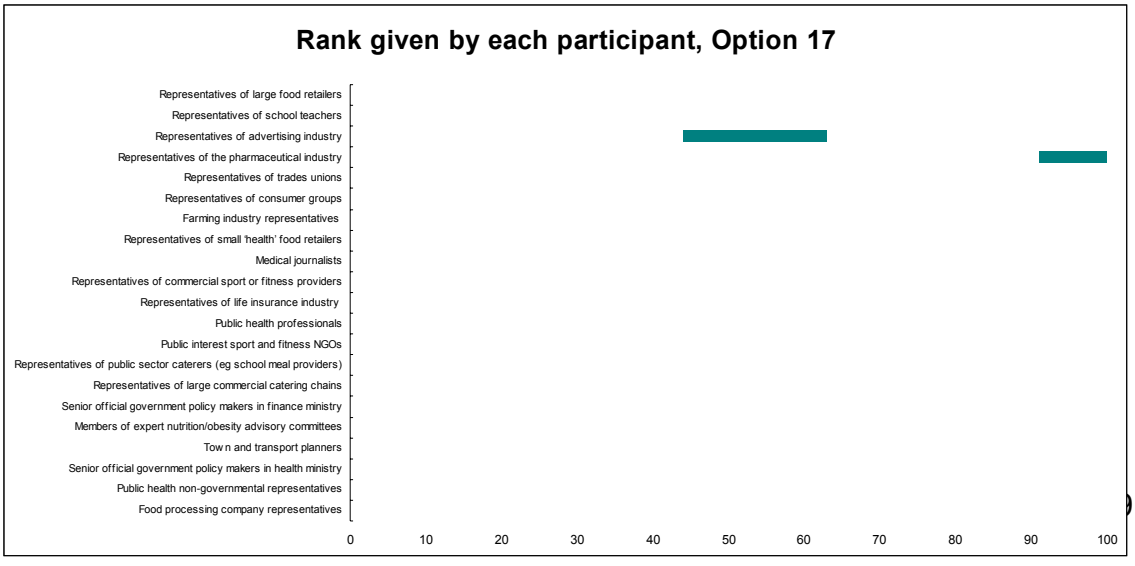


E. Technological Innovations

Option 16. Increased use of medication to control body weight.

Any of the participants in the different groups made comments on this initiative.

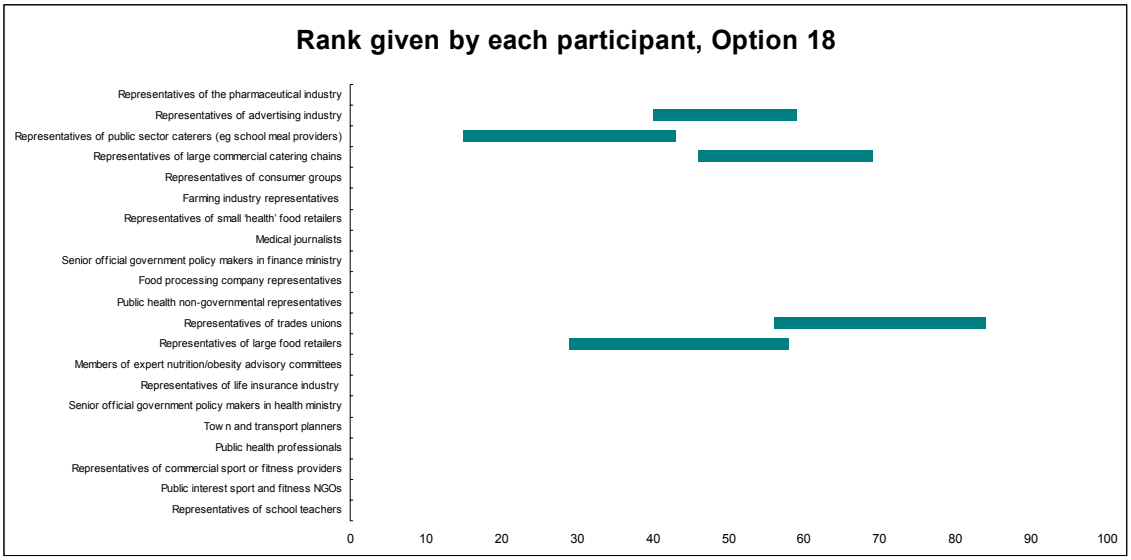
Graph 10.18 Upper and Lower Ranks for Option Increased Use of Medication to Control Body Weight



Option 17. Increased use of synthetic fats and artificial sweeteners.

Any of the participants in the different groups made comments on this initiative.

Graph 10.19 Upper and Lower ranks for option Increased use of synthetic fats and artificial sweeteners.

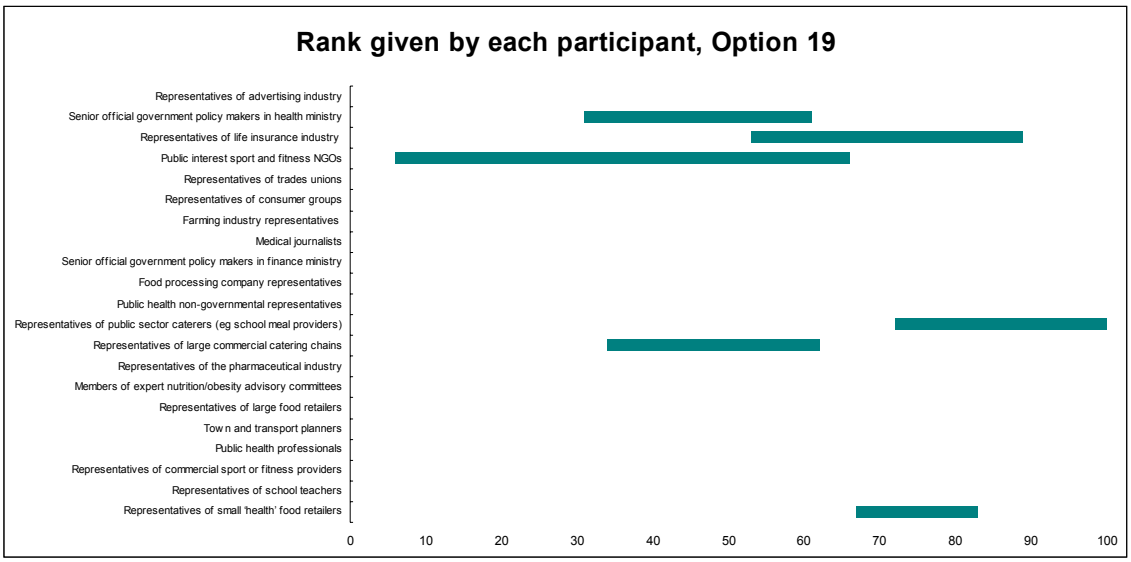


F. Institucional Reforms

Option 18. Creation of a new Government Body to co-ordinate policies relevant to obesity

"This new body could establish synergies and coordinated policies between the different public institutions that work in health issues, in Spain it would be 17 autonomous communities, plus some councils." (Cat12 Life insurance industry)

Graph 10.20 Upper and lower ranks for Option Creation of a new government body to coordinate relevant to obesity.

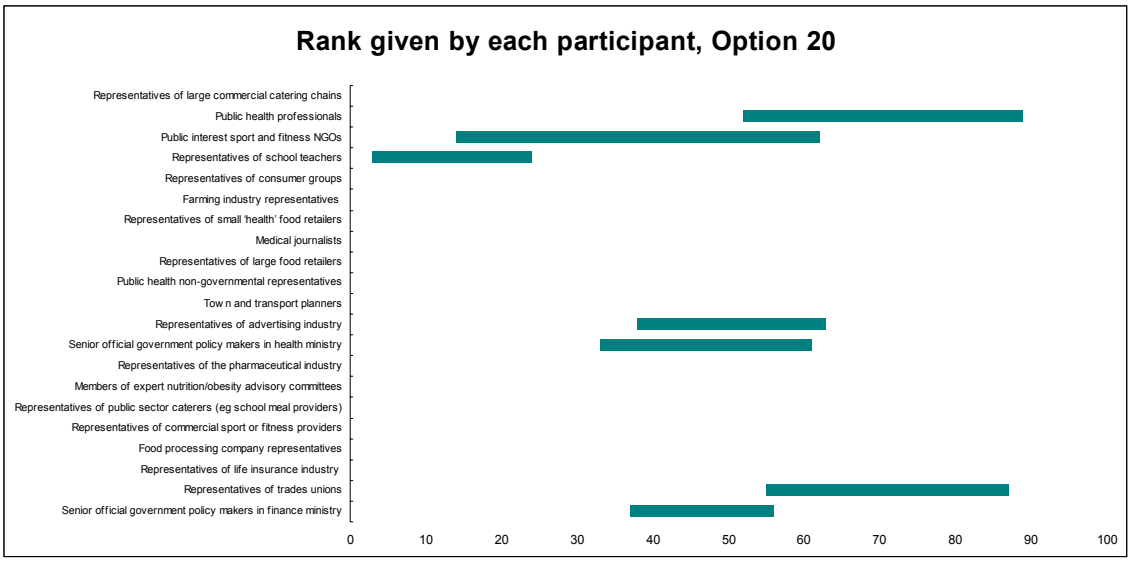


Option 9. Common Agriculture Policy Reform

"Necessary condition but not enough to change habits, this does not mean that automatically people reduces the consumption." (Cat9 Finance ministry offcial)

"It implies to change all the subsidies given at present particularly when it does not involve healthy things, but of lobbying or pressure, and this would imply that these groups become something else."
(Cat10 Publis health professionals)

Graph 10.21 Upper and lower Ranks for option Common Agriculture Policy Reform.



TableXX: Rank extreme by perspective

	Perspective 1		Perspective 2		Perspective 3		Perspective 4		Perspective 5		Perspective 6		Perspective 7	
Options	**Extreme Start**	**Extreme Length**	**Extreme Start**	**Extreme Length**	**Extreme Start**	**Extreme Length**	**Extreme Stara**	**Extreme Length**	**Extrema Start**	**Extrema Length**	**Extrema Start**	**Extrema Length**	**Extrema Start**	**Extrema Length**
Change the transport policies and planning (C)	36	57	18	66	11	41	0	89	27	30	6	66	24	63
Improve communal sports facilities (C)	26	61	46	51	16	51	60	32	28	33	5	75	25	66
Resources for monitoring the physical activity(D)	36	26	27	73	-1	-1	60	22	-1	-1	14	28	-1	-1
Sales control of foods in public institutions (C)	13	64	40	34	12	61	11	68	46	41	0	80	53	39
Control in the food composition (D)	28	51	45	26	-1	-1	-1	-1	-1	-1	26	59	-1	-1
Incentives to improve the composition of foods(D)	28	56	42	52	-1	-1	44	25	-1	-1	51	28	-1	-1
Provide the supply of healthy menus (D)	22	62	61	23	40	16	56	23	44	28	25	54	75	20
Mandatory nutritional information labeling (C)	11	89	13	74	40	43	33	67	34	33	0	69	11	76
Control foods and drinks marketing (C)	21	76	43	40	21	60	11	66	27	33	0	83	28	56
Control of marketing terms (D)	26	48	36	31	26	16	59	22	32	28	32	38	-1	-1
Improve training for health professionals (D)	40	40	52	33	56	7	60	31	-1	-1	37	31	54	31
Improved health education (D)	42	45	51	43	60	25	54	43	53	28	43	55	50	39
Education on food and health (D)	54	36	55	45	75	5	68	30	70	28	41	56	50	39
More research into obesity (D)	54	32	41	32	49	28	50	22	-1	-1	13	31	26	50
Subsidies in healthy foods (C)	0	62	0	80	19	46	8	59	27	34	0	83	37	61
Taxes on obesity-promoting obesity(C)	0	62	0	56	12	46	0	54	0	37	0	96	16	62
Medication for obesity control (D)	-1	-1	-1	-1	-1	-1	44	56	-1	-1	-1	-1	-1	-1
Substitutes for fat and sugar (D)	56	28	29	40	-1	-1	40	19	-1	-1	15	28	-1	-1
New government organisation (D)	6	60	34	28	67	16	53	36	31	30	72	28	-1	-1
Common agriculture policy reform (D)	14	73	-1	-1	-1	-1	38	25	33	28	3	21	52	37

Not valued= -1

Perspective 1: Public Interest non-governmental organisations
Perspective 2: Food chain large industrial and commercial organisations
Perspective 3: Small food and fitness commercial organisations
Perspective 4: Large non-food industrial and commercial organisations
Perspective 5: Policy makers
Perspective 6: Public providers
Perspective 7: Public health specialists

Table XY: Ranks means by perspective

	Perspective 1		Perspective 2		Perspective 3		Perspective 4		Perspective 5		Perspective 6		Perspective 7	
Options	**Mean Start**	**Mean Length**	**Mean Start**	**Mean Length**	**Mean Start**	**Mean Length**	**Mean Start**	**Mean Length**	**Mean Start**	**Mean Length**	**Mean Start**	**Mean Length**	**Mean Start**	**Mean Length**
Change planning and transport policies (C)	48	27	49	18	20	16	33	25	28	24	22	42	38	33
Improve communal sports facilities (C)	45	32	58	18	30	20	65	23	29	24	17	34	40	35
Resources to monitor the physical activity. (D)	36	26	50	19	-1	-1	60	22	-1	-1	14	28	-1	-1
Sales control of food in public institutions (C)	32	32	50	15	31	18	37	18	57	24	27	19	59	21
Controls in food composition (D)	36	40	45	26	-1	-1	-1	-1	-1	-1	42	25	-1	-1
Incentives to improve food composition (D)	40	38	55	29	-1	-1	44	25	-1	-1	51	28	-1	-1
Provide the supply of healthy menus(D)	38	34	62	17	40	16	58	20	44	28	34	32	75	20
Mandatory nutritional information labeling. (C)	30	40	44	18	50	22	62	16	41	23	28	17	46	29
Control advertising of foods and drinks. (C)	46	30	50	17	39	24	34	20	35	24	32	17	48	34
Control of marketing terms (D)	40	27	45	20	26	16	61	18	32	28	34	34	-1	-1
Improve training for health professionals (D)	45	33	59	19	56	7	69	15	-1	-1	37	31	54	31
Improved health education. (D)	48	25	67	23	60	17	70	19	53	28	47	41	53	33
Education on food and health. (D)	57	31	69	22	75	5	82	12	70	28	48	44	53	34
More research into obesity. (D)	54	32	51	20	49	28	50	22	-1	-1	13	31	32	42
Subsidies in healthy foods. (C)	22	24	18	18	31	22	30	19	30	23	23	20	50	28
Taxes on obesity-promoting foods. (C)	11	21	13	18	26	15	21	12	4	28	29	17	34	31
Medication for weight control (D)	-1	-1	-1	-1	-1	-1	67	14	-1	-1	-1	-1	-1	-1
Substitute for fat and sugar (D)	56	28	38	26	-1	-1	40	19	-1	-1	15	28	-1	-1
New Government Organisation(D)	6	60	34	28	67	16	53	36	31	30	72	28	-1	-1
Common agriculture policy reform (D)	35	40	-1	-1	-1	-1	38	25	35	23	3	21	52	37

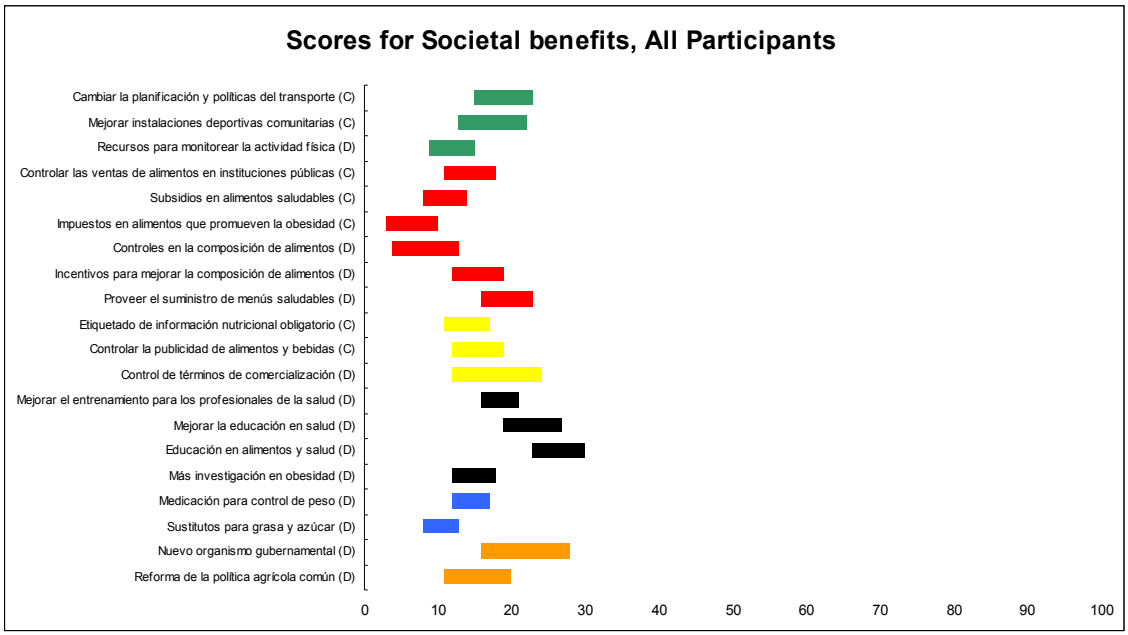
Not valued = -1

Perspective 1: Public interest non-governmental organisations
Perspective 2: Food chain large industrial and commercial organisations
Perspective 3: Small food and fitness commercial organisations
Perspective 4: Big non-food industrial and commercial organizations.
Perspective 5: Policy makers
Perspective 6: Public providers
Perspective 7: Public health specialists

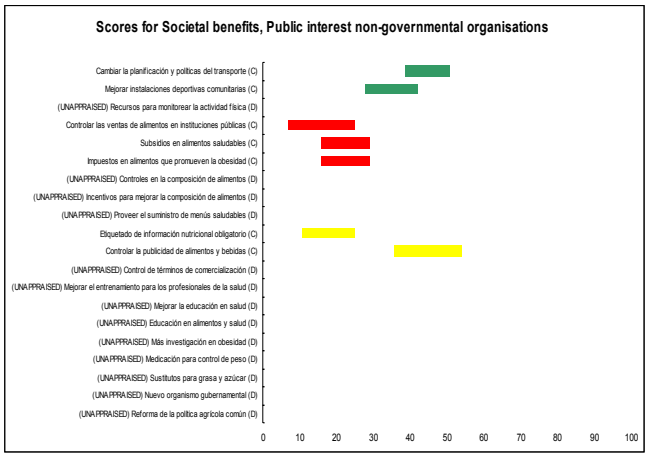
10.4 Diversity and uncertainty in the scoring of options

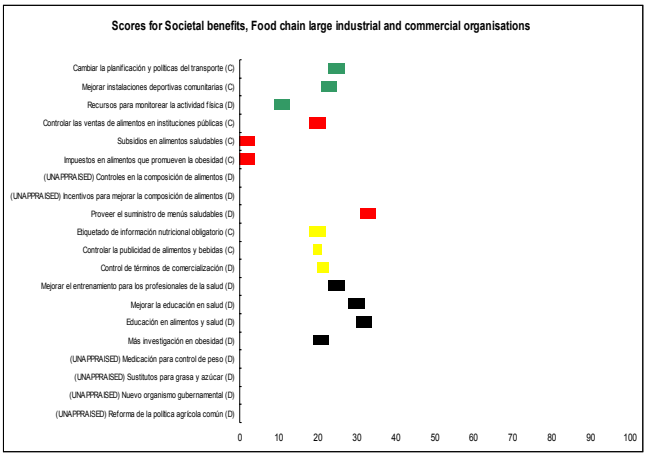
In this section appear the graphs of the scoring by result and perspective. To that purpose each one of the results is presented in a joined graph for all participants, followed by the graphs of the same result under different perspectives. In those cases where any criterion has been classified in the analyzed result, for one perspective in particular, the graph appears in blank, and therefore does not appear in this chapter. An example of this situation can be seen in the result on the economic impact on commercial sector for which any of the participants, selected criteria susceptible to be included in this category.
A classification of results was identified as “others” which does not allow making descriptive comparisons, and consequently it is not considered in this section.

Societal benefits :



According to the result Societal Benefits, options Taxes on obesity-promoting foods, controls on foods composition, and subsidies on healthy foods belonging to the group Modification of foods supply and demand, have significantly low scores. Conversely, options Education on foods and health, new government body and Improved education on health show a low score.
A deeper analysis can be done by examining the options for the result Societal Benefits according to each one of the perspectives:


Scores for Societal benefits, Public interest non-governmental organisations
Cambiar la planificación y políticas del transporte (C)
Mejorar instalaciones deportivas comunitarias (C)
(UNAPPRAISED) Recursos para monitorear la actividad física (D)
Controlar las ventas de alimentos en instituciones públicas (C)
Subsidios en alimentos saludables (C)
Impuestos en alimentos que promueven la obesidad (C)
(UNAPPRAISED) Controles en la composición de alimentos (D)
(UNAPPRAISED) Incentivos para mejorar la composición de alimentos (D)
(UNAPPRAISED) Proveer el suministro de menús saludables (D)
Etiquetado de información nutricional obligatorio (C)
Controlar la publicidad de alimentos y bebidas (C)
(UNAPPRAISED) Control de términos de comercialización (D)
(UNAPPRAISED) Mejorar el entrenamiento para los profesionales de la salud (D)
(UNAPPRAISED) Mejorar la educación en salud (D)
(UNAPPRAISED) Educación en alimentos y salud (D)
(UNAPPRAISED) Más investigación en obesidad (D)
(UNAPPRAISED) Medicación para control de peso (D)
(UNAPPRAISED) Sustitutos para grasa y azúcar (D)
(UNAPPRAISED) Nuevo organismo gubernamental (D)
(UNAPPRAISED) Reforma de la política agrícola común (D)
0 10 20 30 40 50 60 70 80 90 100


Scores for Societal benefits, Food chain large industrial and commercial organisations
Cambiar la planificación y políticas del transporte (C)
Mejorar instalaciones deportivas comunitarias (C)
Recursos para monitorear la actividad física (D)
Controlar las ventas de alimentos en instituciones públicas (C)
Subsidios en alimentos saludables (C)
Impuestos en alimentos que promueven la obesidad (C)
(UNAPPRAISED) Controles en la composición de alimentos (D)
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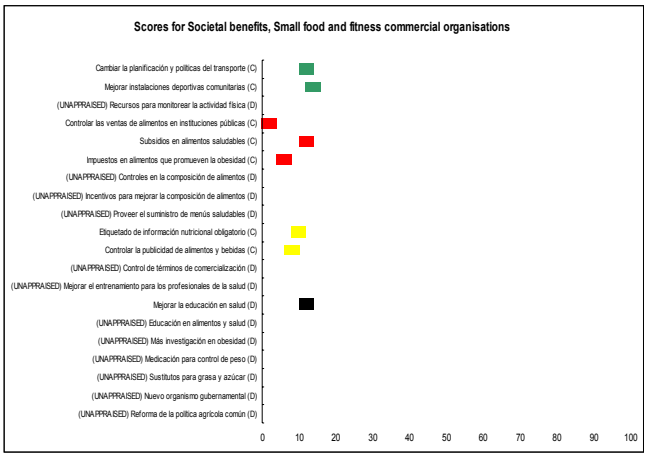
Etiquetado de información nutricional obligatorio (C)
Controlar la publicidad de alimentos y bebidas (C)
Control de términos de comercialización (D)
Mejorar el entrenamiento para los profesionales de la salud (D)
Mejorar la educación en salud (D)
Educación en alimentos y salud (D)
Más investigación en obesidad (D)
(UNAPPRAISED) Medicación para control de peso (D)
(UNAPPRAISED) Sustitutos para grasa y azúcar (D)
(UNAPPRAISED) Nuevo organismo gubernamental (D)
(UNAPPRAISED) Reforma de la política agrícola común (D)
0 10 20 30 40 50 60 70 80 90 100


Scores for Societal benefits, Small food and fitness commercial organisations
Cambiar la planificación y políticas del transporte (C)
Mejorar instalaciones deportivas comunitarias (C)
(UNAPPRAISED) Recursos para monitorear la actividad física (D)
Controlar las ventas de alimentos en instituciones públicas (C)
Subsidios en alimentos saludables (C)
Impuestos en alimentos que promueven la obesidad (C)
(UNAPPRAISED) Controles en la composición de alimentos (D)
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Etiquetado de información nutricional obligatorio (C)
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Mejorar la educación en salud (D)
(UNAPPRAISED) Educación en alimentos y salud (D)
(UNAPPRAISED) Más investigación en obesidad (D)
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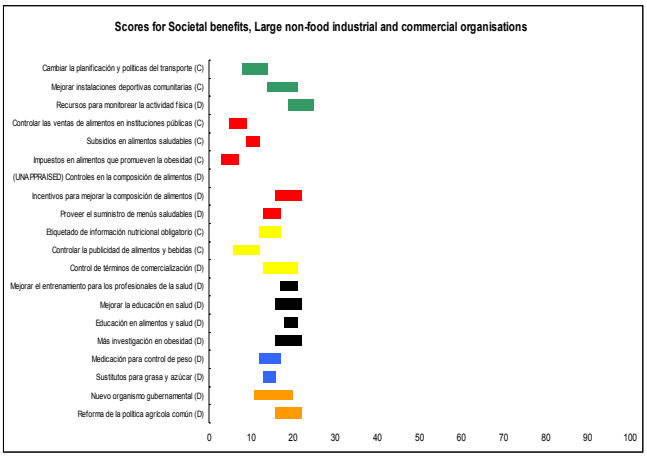
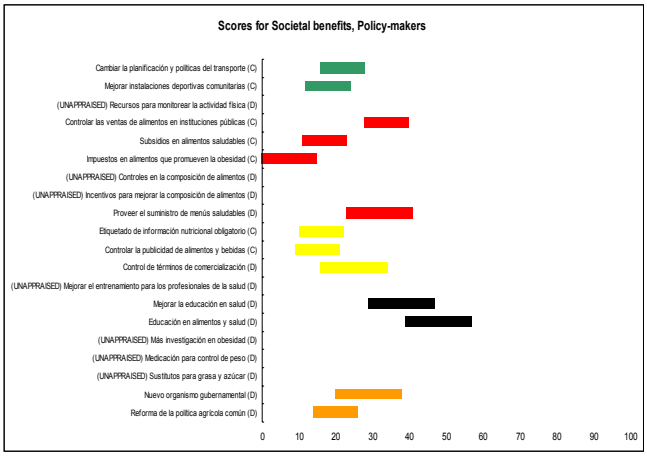
(UNAPPRAISED) Sustitutos para grasa y azúcar (D)
(UNAPPRAISED) Nuevo organismo gubernamental (D)
(UNAPPRAISED) Reforma de la política agrícola común (D)
0 10 20 30 40 50 60 70 80 90 100


Scores for Societal benefits, Large non-food industrial and commercial organisations
Cambiar la planificación y políticas del transporte (C)
Mejorar instalaciones deportivas comunitarias (C)
Recursos para monitorear la actividad física (D)
Controlar las ventas de alimentos en instituciones públicas (C)
Subsidios en alimentos saludables (C)
Impuestos en alimentos que promueven la obesidad (C)
(UNAPPRAISED) Controles en la composición de alimentos (D)
Incentivos para mejorar la composición de alimentos (D)
Proveer el suministro de menús saludables (D)
Etiquetado de información nutricional obligatorio (C)
Controlar la publicidad de alimentos y bebidas (C)
Control de términos de comercialización (D)
Mejorar el entrenamiento para los profesionales de la salud (D)
Mejorar la educación en salud (D)
Educación en alimentos y salud (D)
Más investigación en obesidad (D)
Medicación para control de peso (D)
Sustitutos para grasa y azúcar (D)
Nuevo organismo gubernamental (D)
Reforma de la política agrícola común (D)
0 10 20 30 40 50 60 70 80 90 100


Scores for Societal benefits, Policy-makers
Cambiar la planificación y políticas del transporte (C)
Mejorar instalaciones deportivas comunitarias (C)
(UNAPPRAISED) Recursos para monitorear la actividad física (D)
Controlar las ventas de alimentos en instituciones públicas (C)
Subsidios en alimentos saludables (C)
Impuestos en alimentos que promueven la obesidad (C)
(UNAPPRAISED) Controles en la composición de alimentos (D)
(UNAPPRAISED) Incentivos para mejorar la composición de alimentos (D)
Proveer el suministro de menús saludables (D)
Etiquetado de información nutricional obligatorio (C)
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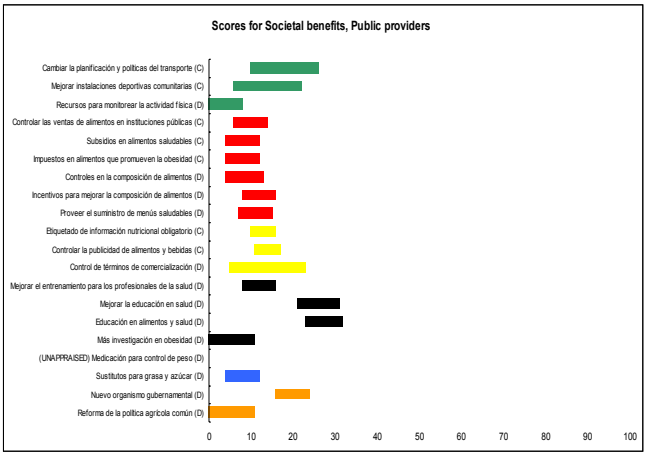
Control de términos de comercialización (D)
(UNAPPRAISED) Mejorar el entrenamiento para los profesionales de la salud (D)
Mejorar la educación en salud (D)
Educación en alimentos y salud (D)
(UNAPPRAISED) Más investigación en obesidad (D)
(UNAPPRAISED) Medicación para control de peso (D)
(UNAPPRAISED) Sustitutos para grasa y azúcar (D)
Nuevo organismo gubernamental (D)
Reforma de la política agrícola común (D)
0 10 20 30 40 50 60 70 80 90 100


Scores for Societal benefits, Public providers
Cambiar la planificación y políticas del transporte (C)
Mejorar instalaciones deportivas comunitarias (C)
Recursos para monitorear la actividad física (D)
Controlar las ventas de alimentos en instituciones públicas (C)
Subsidios en alimentos saludables (C)
Impuestos en alimentos que promueven la obesidad (C)
Controles en la composición de alimentos (D)
Incentivos para mejorar la composición de alimentos (D)
Proveer el suministro de menús saludables (D)
Etiquetado de información nutricional obligatorio (C)
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Control de términos de comercialización (D)
Mejorar el entrenamiento para los profesionales de la salud (D)
Mejorar la educación en salud (D)
Educación en alimentos y salud (D)
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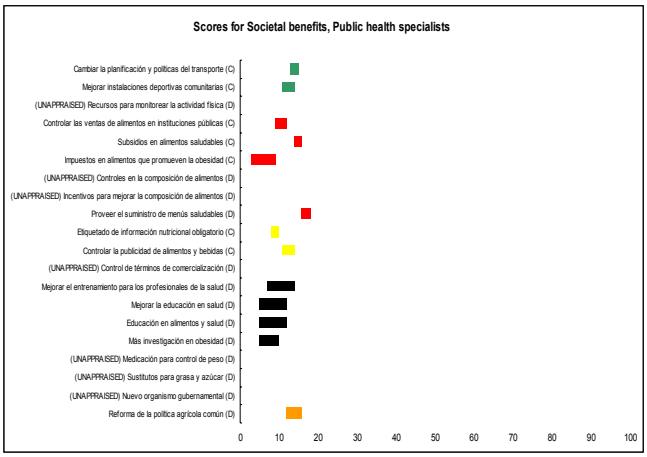
(UNAPPRAISED) Medicación para control de peso (D)
Sustitutos para grasa y azúcar (D)
Nuevo organismo gubernamental (D)
Reforma de la política agrícola común (D)
0 10 20 30 40 50 60 70 80 90 100


Scores for Societal benefits, Public health specialists
Cambiar la planificación y políticas del transporte (C)
Mejorar instalaciones deportivas comunitarias (C)
(UNAPPRAISED) Recursos para monitorear la actividad física (D)
Controlar las ventas de alimentos en instituciones públicas (C)
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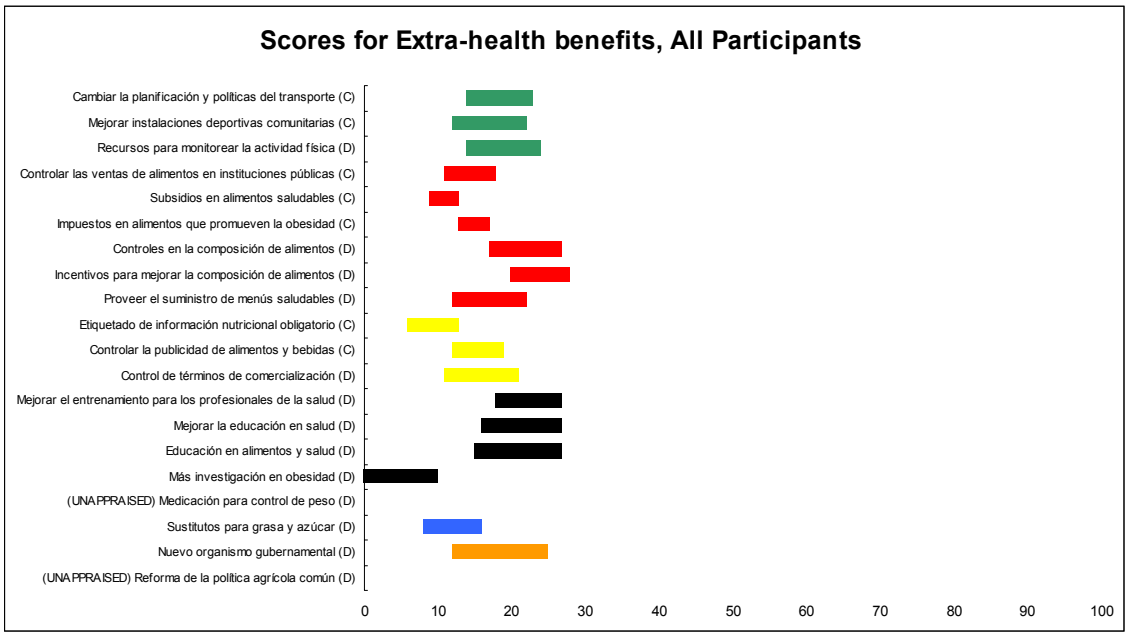
(UNAPPRAISED) Nuevo organismo gubernamental (D)
Reforma de la política agrícola común (D)
0 10 20 30 40 50 60 70 80 90 100

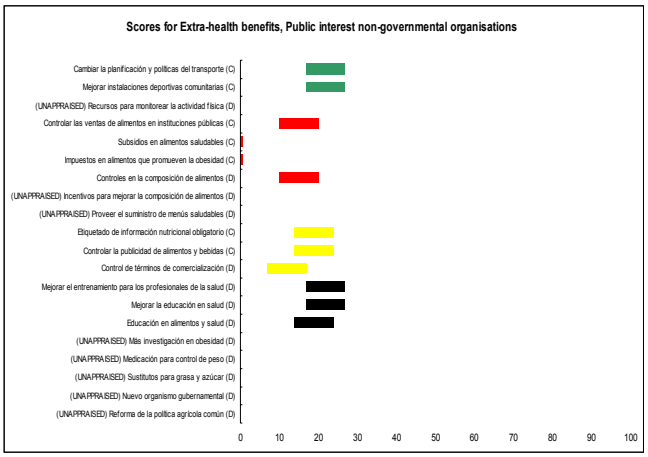
Perspectives that favour a positive score to improved health education are: Policy Makers, Public Caterers, Large non-food industrial and commercial organisations. On the contrary, Public health professionals and Small food and fitness commercial organisations show a low score for the result societal benefits.

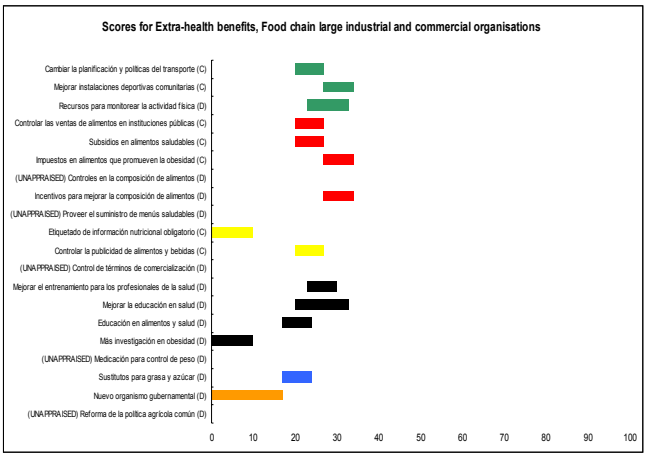
Extra health benifits:

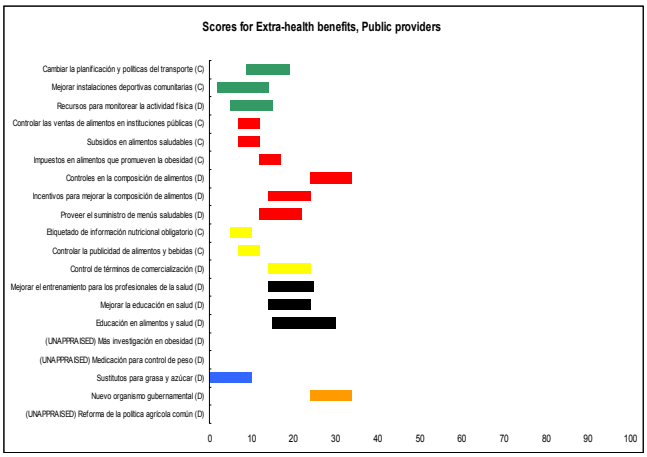


For the result Extra health benefits, option More obesity research has a very low score, followed by mandatory nutritional information labeling, and substitutes for fat and sugar. On the contrary, options Incentives to improve foods composition, and controls on compositions of processed food products and those belonging to the group of Educational and research initiatives (with the exception of More obesity research) show a good score.
It is important to highlight that this result is the outcome of 4 scores (as shown in table AABB) and thus it is complicated to reach to reliable conclusions.

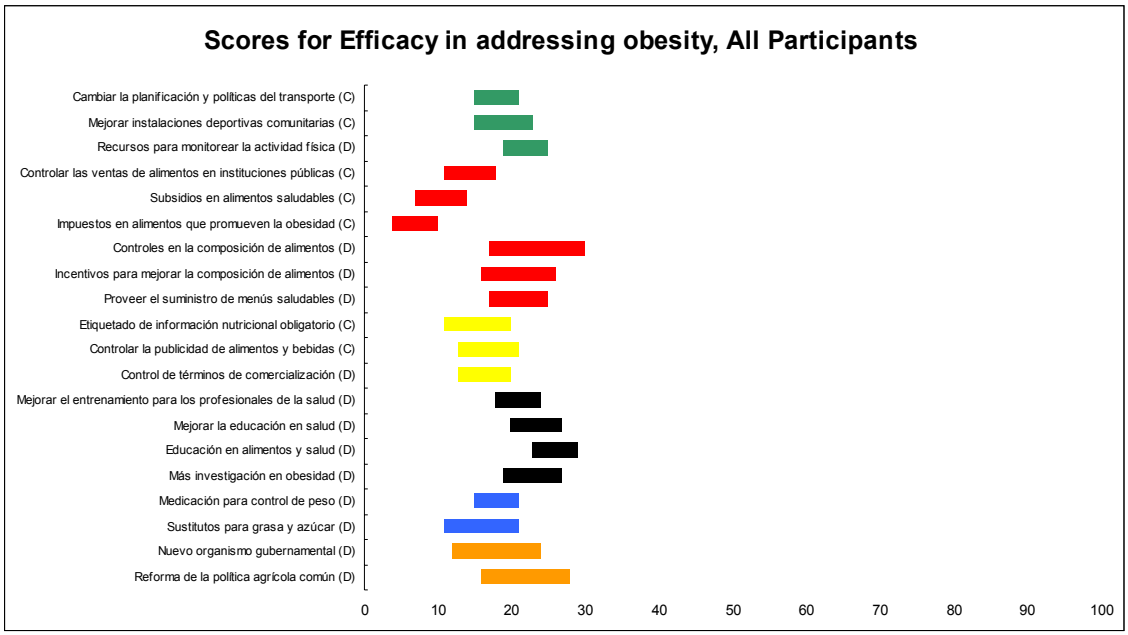
A deeper analysis can be done to examine the options for the result Societal Benefits according to each one of the perspectives summarized as follows, as well as the graphs.
The result on the Extra health benefits only deals with criteria providing from the perspectives Public interest non governmental organizations, Food chain large industrial and commercial organisations, and public providers. The other perspectives did not consider the criteria to be included in this type of results.
For this type of result, a similarity between the perspectives positively scored is seen. However, for the pessimist score there are different results in the lower score rank for the three perspectives that appear in this analysis.







Efficacy in addressing obesity:

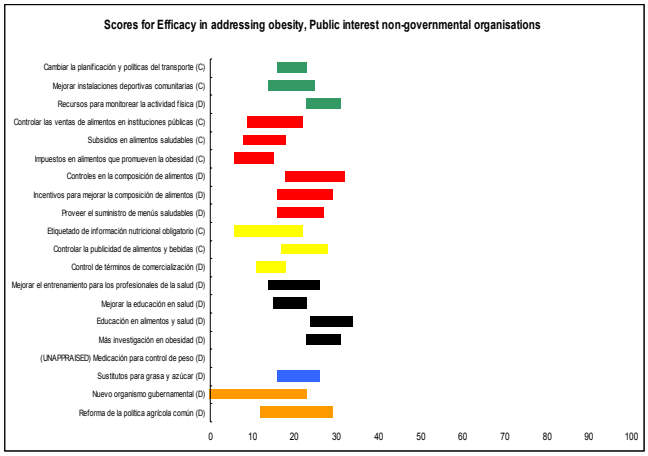


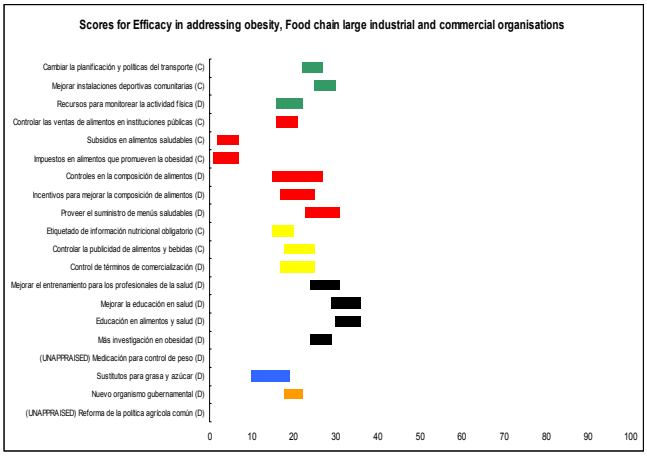
The result Efficacy in addressing obesity shows that within the group Modifying the supply of and demand for foodstuffs, options Taxes on Obesity-promoting foods and subsidies on healthy foods are the lowest ones. Conversely and in the same group, appears the highest scored option, Controls in food composition. On the other hand, options regarding educational and research initiatives along with option Common Agricultural Policy reform present good scores.

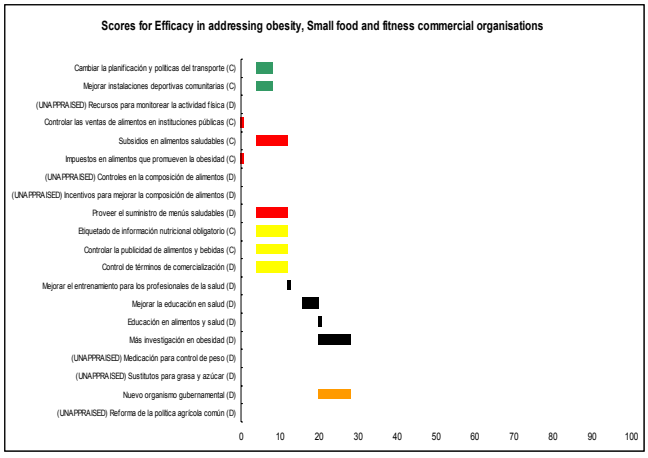
In this result, perspective public providers has not been taken into account, in so far as any criterion was included in this category.

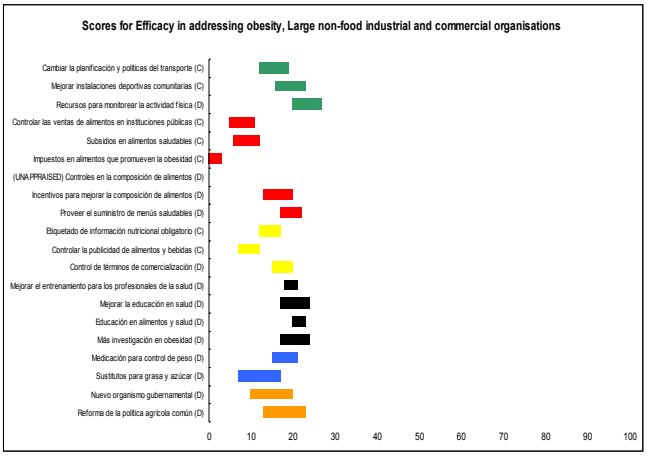
A deeper analysis can be made by examining the option for the result Societal Benefits according to each one of the perspectives:

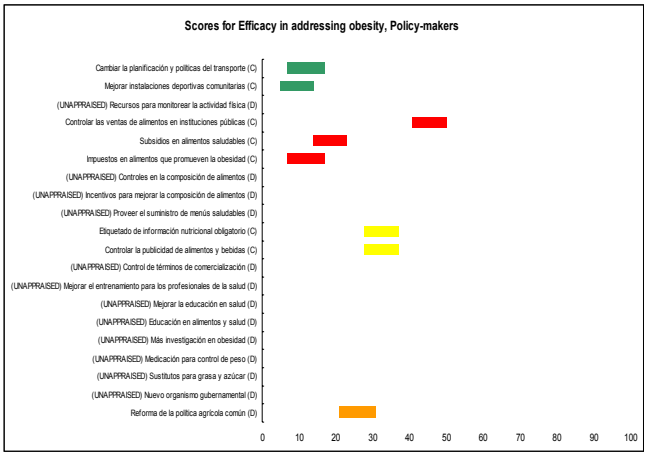
The highest score assigned to option Controls on foods composition under the result Efficacy in addressing obesity is determined by the perspectives Public interest non governmental organizations and Food chain large industrial and commercial organisations. Contrarily to the positive score reflected in the graph of all participants under this result, option More obesity research, shows a negative score for the perspective Public health specialists.

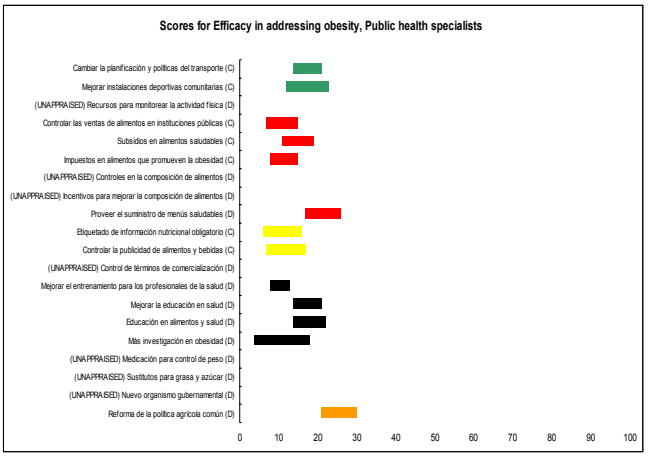




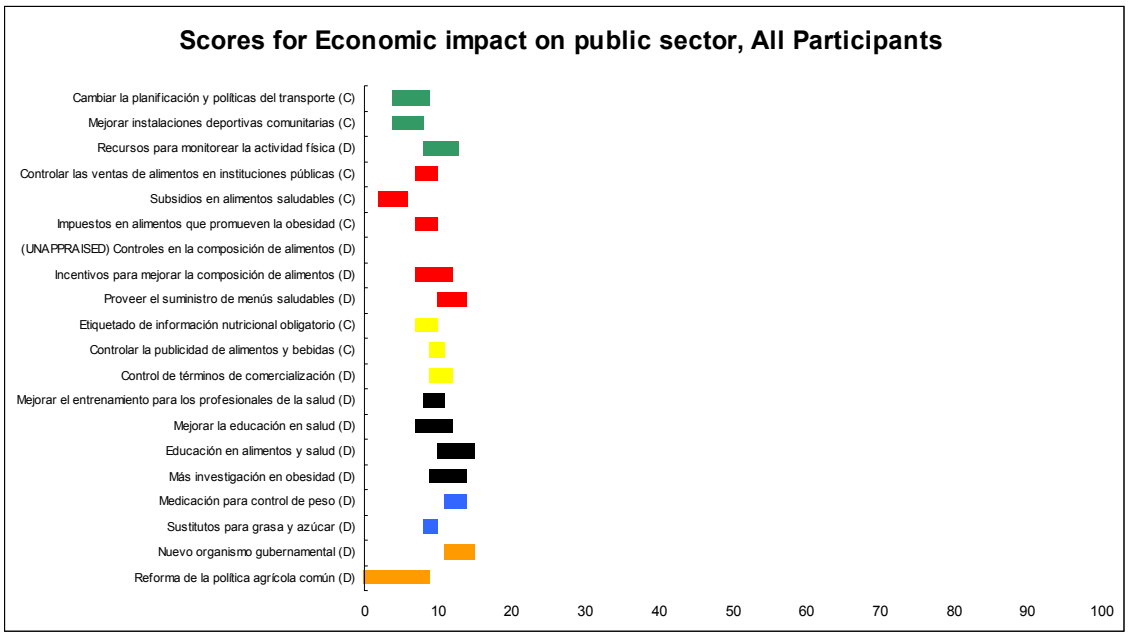








Economic Impact on Public Sector:



For the result economic impact on public sector the options with a low score are the following: Common agriculture policy reform, and Subsidies on healthy foods, along with change planning and transport policies and improve communal sports facilities of the group of options Exercise and phisycal activity-oriented. Although there are many options that show positive scores, any stands out in particular: Food and health education, New Government Body, Provide healthier catering menus, More obesity research and Medication for weight control.

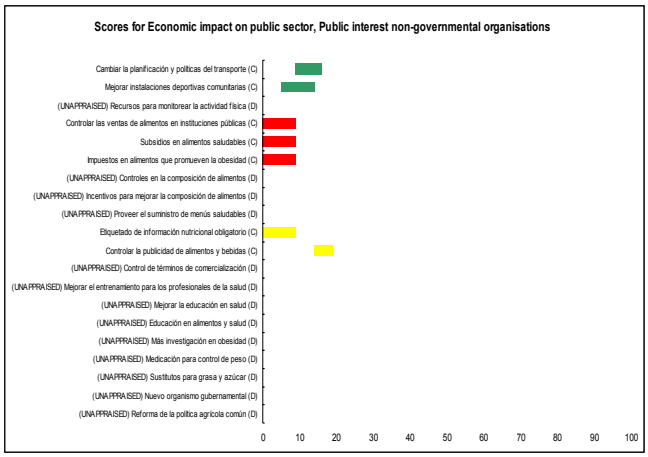
It is important to highlight that this result is the outcome of 7 scores (as shown in table AABB) and thus it is complicated to reach to reliable conclusions.

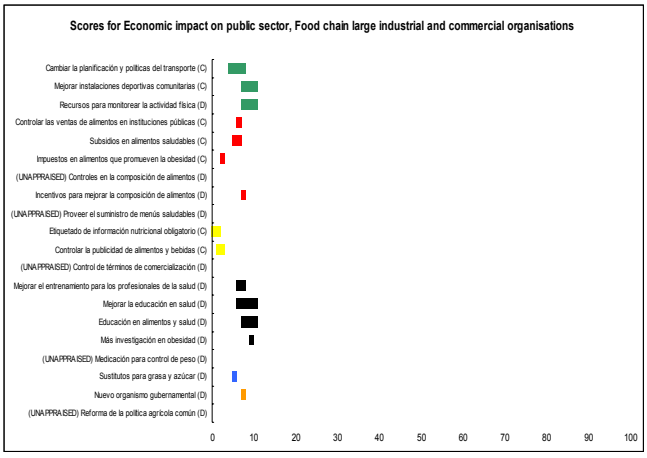
A deeper analysis can be done when examining the options for the result Societal Benefits according to each one of the perspectives:

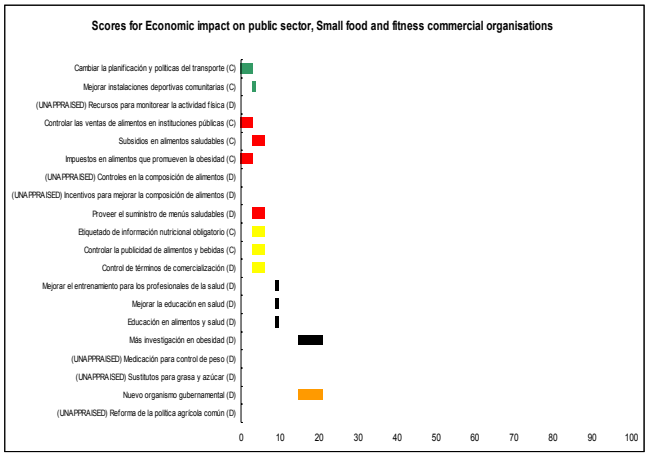
For this result the perspective of policy makers has not been taken into account, in so far as any criterion was included in this category.

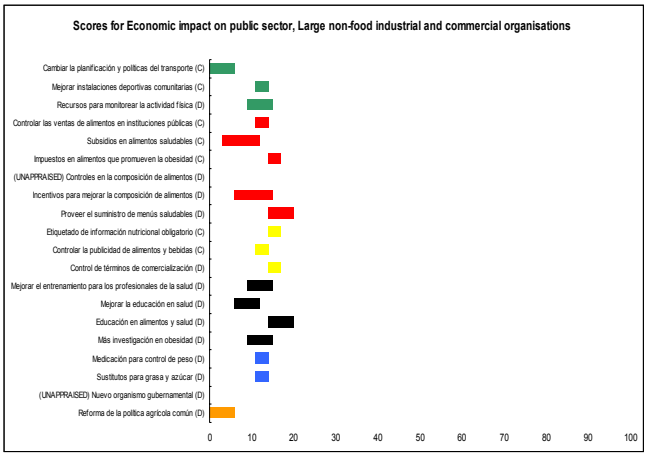
For the group Informational Initiatives (mandatory nutritional information labeling, control on foods aand drink advertising, control the use of marketing terms) a particularly low score was seen for the perspectives Small food and fitness commercial organisations, Food chain large industrial and commercial organisations, and public providers. On the contrary, the Large non-food industrial and commercial organisation, Public health specialists and Public Interest non-governmental organisations (for option Control on food and drink advertising) assign high scores to this group of initiatives; which are finally reflected in the graph as a whole.

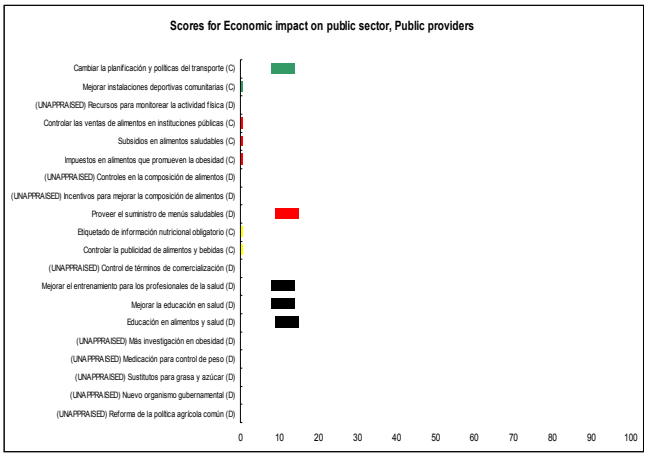
The high score under this result for option Taxes on obesity-promoting foods must be highlighted which is determined by perspectives Large non-food industrial and commercial organisations and Public health specialists.

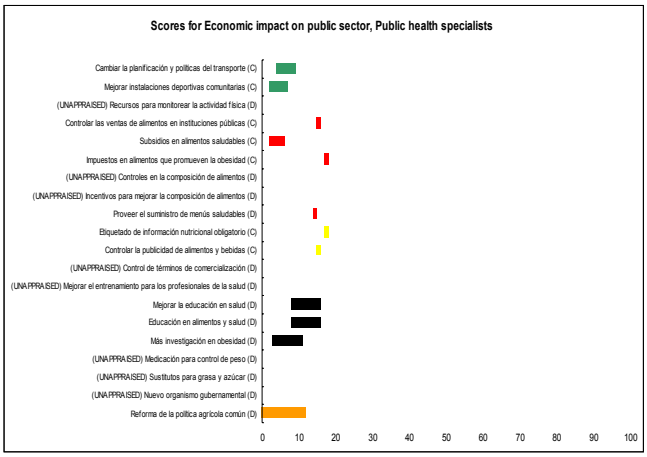




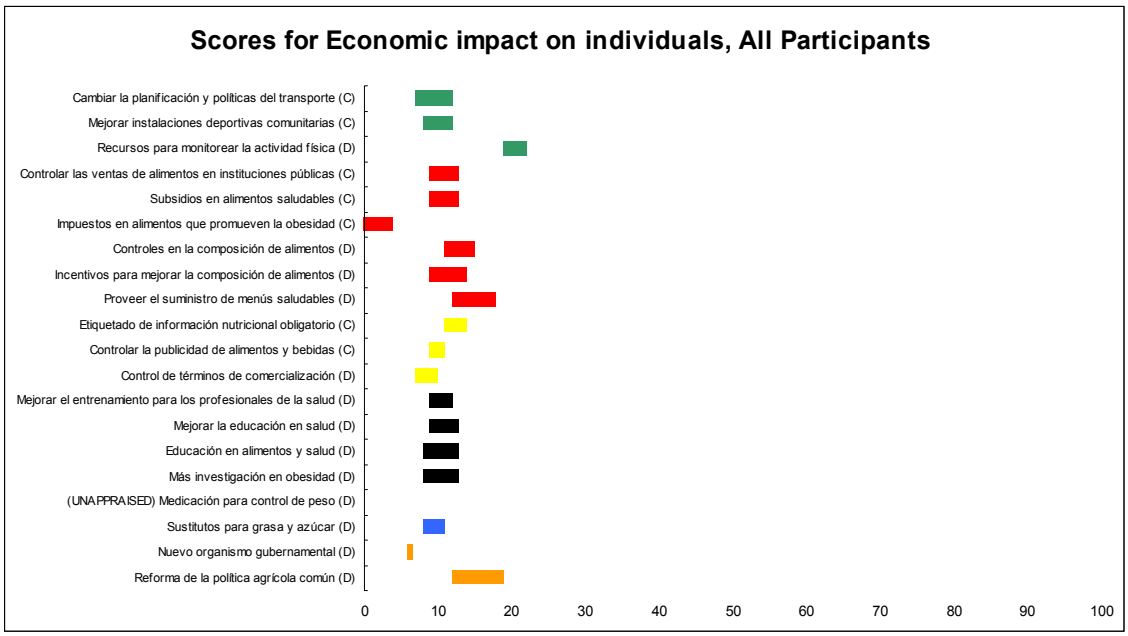








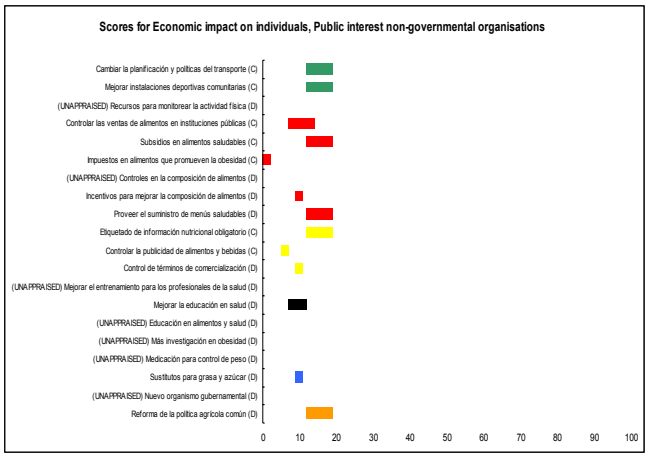
Economic Impact on Individuals:

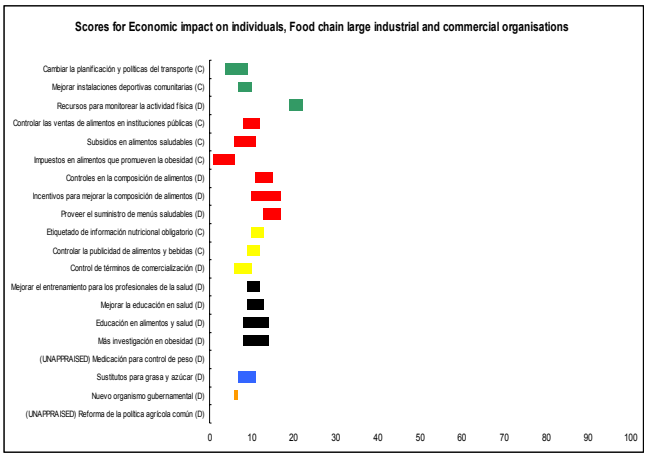


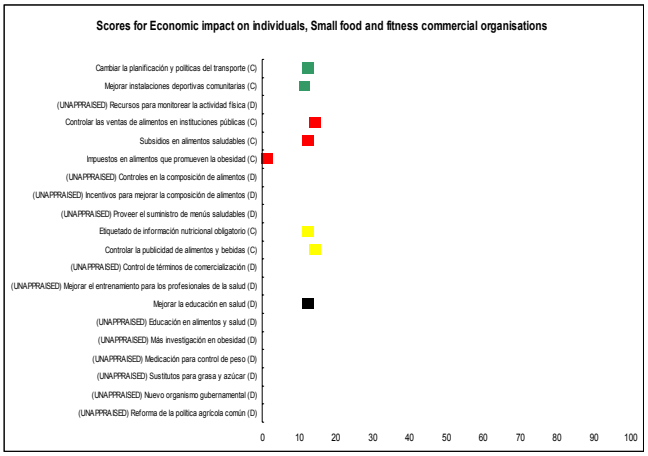
According to the result Economic Impact on Individuals, almost all the options have been scored with a medium score, the options with opposite scores are the following: Taxes on obesity-promoting food is the lowest scored, whereas Devices to monitor the physical activity and common agriculture policy reform are the highest ones.
It is important to highlight that this result is the outcome of 6 scores (as shown in table AABB) and thus it is complicated to reach to reliable conclusions.
A deeper analysis can be made when examining the options for the result Societal Benefits according to each one of the perspectives:

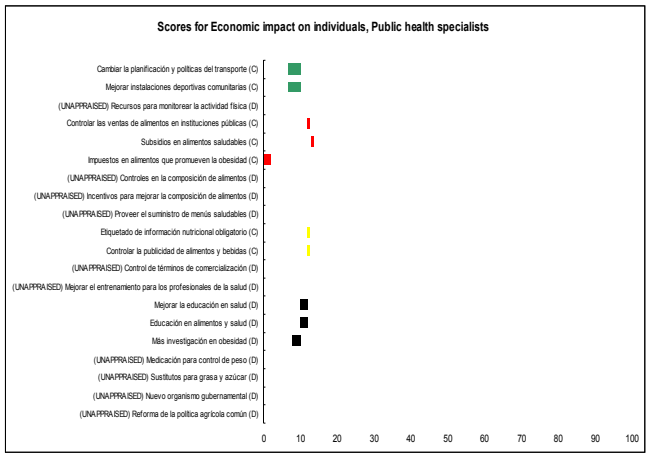
For this result, the perspectives Public providers, large non-food industrial and commercial organisations and policy makers have not been taken into account. Any criterion was included for these categories by the participants that form part of them.

The options Devices to Monitor the Physical activity and Common Agriculture Policy Reform, show high scores for the perspectives Food chain large industrial and commercial organisations and Public Interest non governmental organisations which are not being included in the other perspectives. Option Improve health education is the only one that coincides with a positive scoring for all the perspectives under result Economic Impact on Individuals. Along the lines, there were similarities between the perspectives in the negative score of the initiative on taxes on obesity-promoting foods.

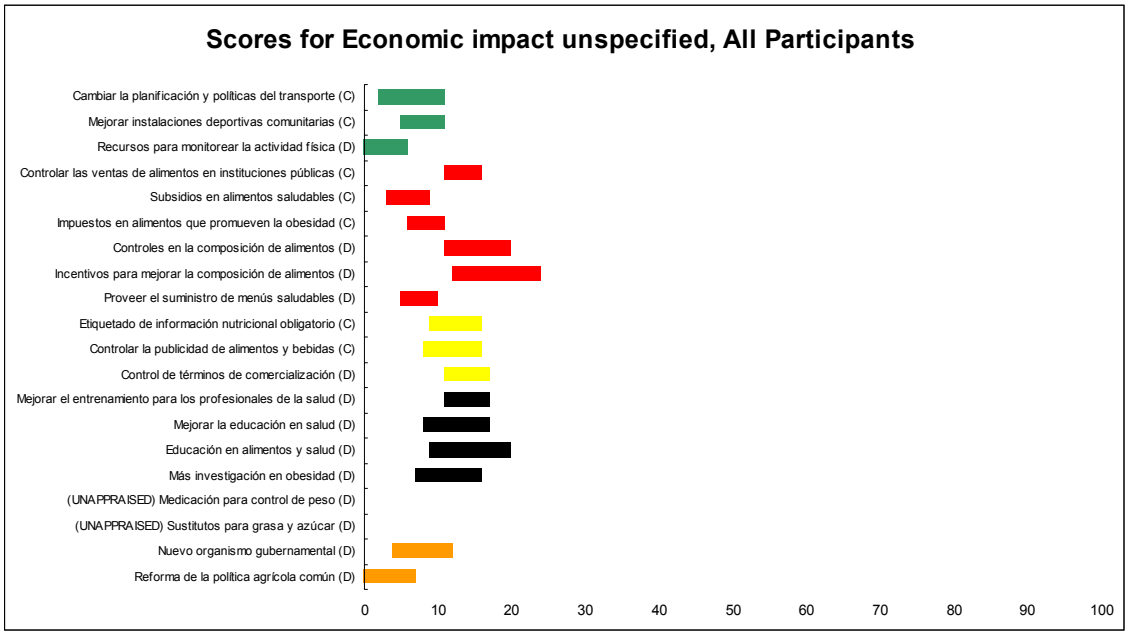

Scores for Economic impact on individuals, Public interest non-governmental organisations
Cambiar la planificación y políticas del transporte (C)
Mejorar instalaciones deportivas comunitarias (C)
(UNAPPRAISED) Recursos para monitorear la actividad física (D)
Controlar las ventas de alimentos en instituciones públicas (C)
Subsidios en alimentos saludables (C)
Impuestos en alimentos que promueven la obesidad (C)
(UNAPPRAISED) Controles en la composición de alimentos (D)
Incentivos para mejorar la composición de alimentos (D)
Proveer el suministro de menús saludables (D)
Etiquetado de información nutricional obligatorio (C)
Controlar la publicidad de alimentos y bebidas (C)
Control de términos de comercialización (D)
(UNAPPRAISED) Mejorar el entrenamiento para los profesionales de la salud (D)
Mejorar la educación en salud (D)
(UNAPPRAISED) Educación en alimentos y salud (D)
(UNAPPRAISED) Más investigación en obesidad (D)
(UNAPPRAISED) Medicación para control de peso (D)
Sustitutos para grasa y azúcar (D)
(UNAPPRAISED) Nuevo organismo gubernamental (D)
Reforma de la política agrícola común (D)
0 10 20 30 40 50 60 70 80 90 100


Scores for Economic impact on individuals, Food chain large industrial and commercial organisations
Cambiar la planificación y políticas del transporte (C)
Mejorar instalaciones deportivas comunitarias (C)
Recursos para monitorear la actividad física (D)
Controlar las ventas de alimentos en instituciones públicas (C)
Subsidios en alimentos saludables (C)
Impuestos en alimentos que promueven la obesidad (C)
Controles en la composición de alimentos (D)
Incentivos para mejorar la composición de alimentos (D)
Proveer el suministro de menús saludables (D)
Etiquetado de información nutricional obligatorio (C)
Controlar la publicidad de alimentos y bebidas (C)
Control de términos de comercialización (D)
Mejorar el entrenamiento para los profesionales de la salud (D)
Mejorar la educación en salud (D)
Educación en alimentos y salud (D)
Más investigación en obesidad (D)
(UNAPPRAISED) Medicación para control de peso (D)
Sustitutos para grasa y azúcar (D)
Nuevo organismo gubernamental (D)
(UNAPPRAISED) Reforma de la política agrícola común (D)
0 10 20 30 40 50 60 70 80 90 100


Scores for Economic impact on individuals, Small food and fitness commercial organisations
Cambiar la planificación y políticas del transporte (C)
Mejorar instalaciones deportivas comunitarias (C)
(UNAPPRAISED) Recursos para monitorear la actividad física (D)
Controlar las ventas de alimentos en instituciones públicas (C)
Subsidios en alimentos saludables (C)
Impuestos en alimentos que promueven la obesidad (C)
(UNAPPRAISED) Controles en la composición de alimentos (D)
(UNAPPRAISED) Incentivos para mejorar la composición de alimentos (D)
(UNAPPRAISED) Proveer el suministro de menús saludables (D)
Etiquetado de información nutricional obligatorio (C)
Controlar la publicidad de alimentos y bebidas (C)
(UNAPPRAISED) Control de términos de comercialización (D)
(UNAPPRAISED) Mejorar el entrenamiento para los profesionales de la salud (D)
Mejorar la educación en salud (D)
(UNAPPRAISED) Educación en alimentos y salud (D)
(UNAPPRAISED) Más investigación en obesidad (D)
(UNAPPRAISED) Medicación para control de peso (D)
(UNAPPRAISED) Sustitutos para grasa y azúcar (D)
(UNAPPRAISED) Nuevo organismo gubernamental (D)
(UNAPPRAISED) Reforma de la política agrícola común (D)
0 10 20 30 40 50 60 70 80 90 100

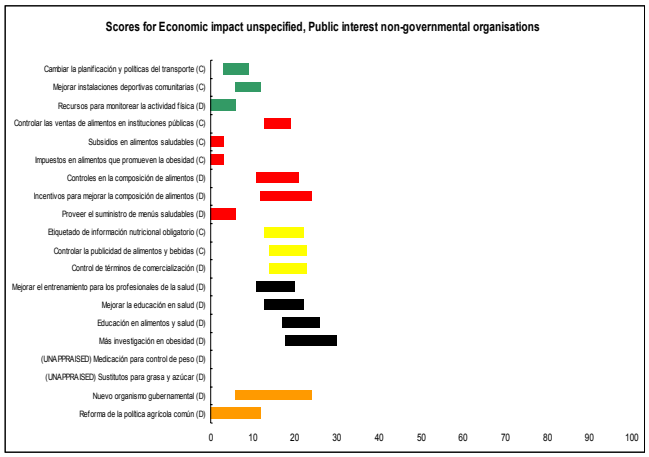

Scores for Economic impact on individuals, Public health specialists
Cambiar la planificación y políticas del transporte (C)
Mejorar instalaciones deportivas comunitarias (C)
(UNAPPRAISED) Recursos para monitorear la actividad física (D)
Controlar las ventas de alimentos en instituciones públicas (C)
Subsidios en alimentos saludables (C)
Impuestos en alimentos que promueven la obesidad (C)
(UNAPPRAISED) Controles en la composición de alimentos (D)
(UNAPPRAISED) Incentivos para mejorar la composición de alimentos (D)
(UNAPPRAISED) Proveer el suministro de menús saludables (D)
Etiquetado de información nutricional obligatorio (C)
Controlar la publicidad de alimentos y bebidas (C)
(UNAPPRAISED) Control de términos de comercialización (D)
(UNAPPRAISED) Mejorar el entrenamiento para los profesionales de la salud (D)
Mejorar la educación en salud (D)
Educación en alimentos y salud (D)
Más investigación en obesidad (D)
(UNAPPRAISED) Medicación para control de peso (D)
(UNAPPRAISED) Sustitutos para grasa y azúcar (D)
(UNAPPRAISED) Nuevo organismo gubernamental (D)
(UNAPPRAISED) Reforma de la política agrícola común (D)
0 10 20 30 40 50 60 70 80 90 100

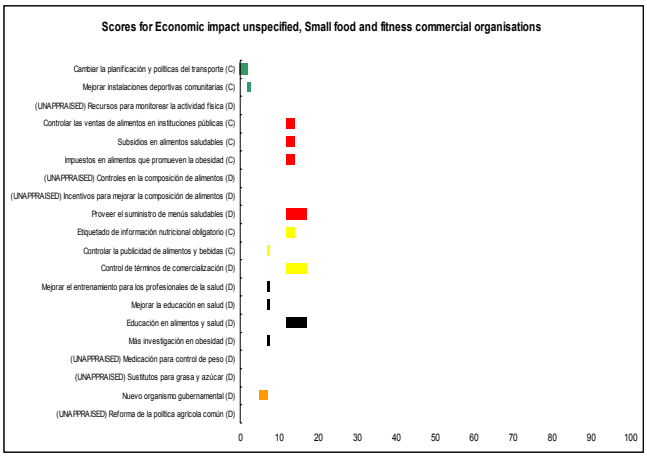
Economic impact unspecified:



For the result Unspecified Economic Impact, options Devices to monitor the physical activity and change planning and transport policies regarding the group of options orientated to the exercise and physical activity - oriented and the option Common Agriculture Policy reform are the lowest scored ones. On the contrary, options Incentives to Improve foods composition, Controls on composition of processed food products and Food and health education show a good score.
It is important to highlight that this result is the outcome of 7 scores (as shown in table AABB) and thus it is complicated to reach to a reliable conclusion.
For this result the perspectives Food chain large industrial and commercial organisations and large non-food industrial and commercial organisations have not been taken into account. Any criterion was included by the participants who form part of them.
A deeper analysis can be done when examining the options for the result Societal Benefits according to each one of the perspectives:

The option Incentives to Improve food composition, stands out as the best one, and Devices to monitor the physical activity as the lowest one for the joint result of economic impact unspecified, they were only scored for the perspective Public Interest non – governmental organization. A diversity of options when scoring the informational, taxes and subsidies options is also seen.


Scores for Economic impact unspecified, Public interest non-governmental organisations
Cambiar la planificación y políticas del transporte (C)
Mejorar instalaciones deportivas comunitarias (C)
Recursos para monitorear la actividad física (D)
Controlar las ventas de alimentos en instituciones públicas (C)
Subsidios en alimentos saludables (C)
Impuestos en alimentos que promueven la obesidad (C)
Controles en la composición de alimentos (D)
Incentivos para mejorar la composición de alimentos (D)
Proveer el suministro de menús saludables (D)
Etiquetado de información nutricional obligatorio (C)
Controlar la publicidad de alimentos y bebidas (C)
Control de términos de comercialización (D)
Mejorar el entrenamiento para los profesionales de la salud (D)
Mejorar la educación en salud (D)
Educación en alimentos y salud (D)
Más investigación en obesidad (D)
(UNAPPRAISED) Medicación para control de peso (D)
(UNAPPRAISED) Sustitutos para grasa y azúcar (D)
Nuevo organismo gubernamental (D)
Reforma de la política agrícola común (D)
0 10 20 30 40 50 60 70 80 90 100


Scores for Economic impact unspecified, Small food and fitness commercial organisations
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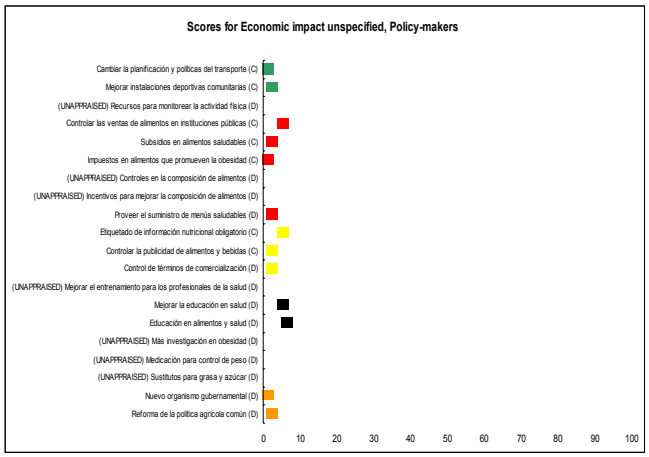
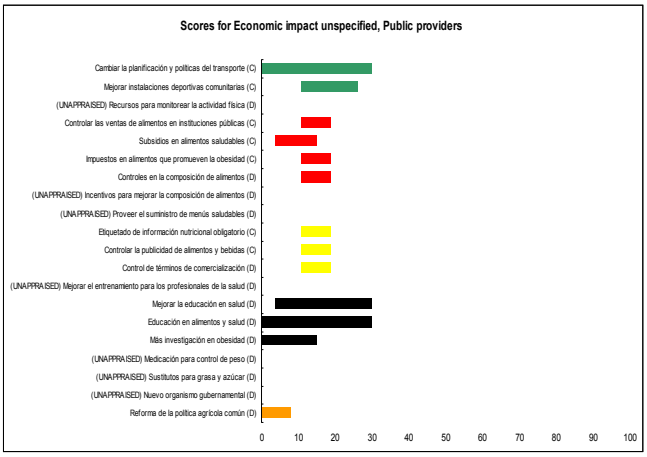
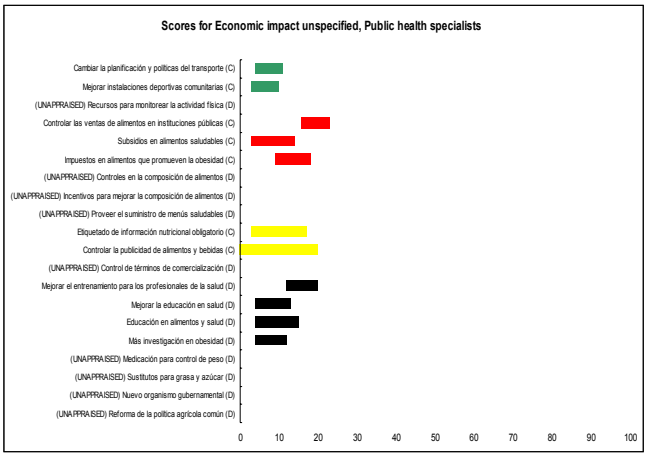
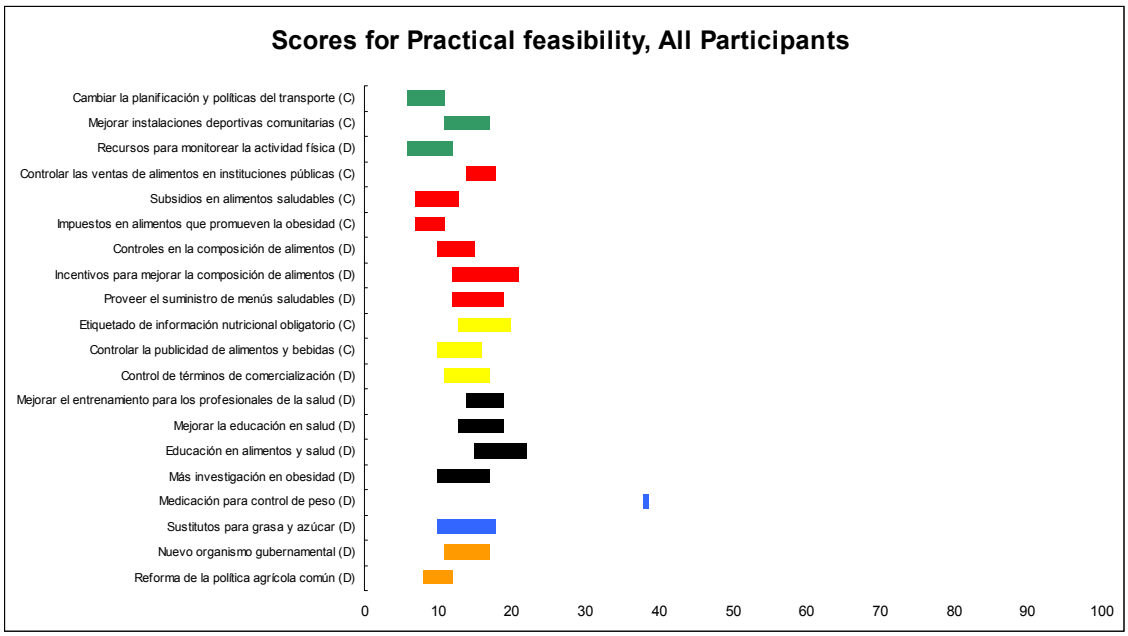
Mejorar instalaciones deportivas comunitarias (C)
(UNAPPRAISED) Recursos para monitorear la actividad física (D)
Controlar las ventas de alimentos en instituciones públicas (C)
Subsidios en alimentos saludables (C)
Impuestos en alimentos que promueven la obesidad (C)
(UNAPPRAISED) Controles en la composición de alimentos (D)
(UNAPPRAISED) Incentivos para mejorar la composición de alimentos (D)
Proveer el suministro de menús saludables (D)
Etiquetado de información nutricional obligatorio (C)
Controlar la publicidad de alimentos y bebidas (C)
Control de términos de comercialización (D)
Mejorar el entrenamiento para los profesionales de la salud (D)
Mejorar la educación en salud (D)
Educación en alimentos y salud (D)
Más investigación en obesidad (D)
(UNAPPRAISED) Medicación para control de peso (D)
(UNAPPRAISED) Sustitutos para grasa y azúcar (D)
Nuevo organismo gubernamental (D)
(UNAPPRAISED) Reforma de la política agrícola común (D)
0 10 20 30 40 50 60 70 80 90 100


Scores for Economic impact unspecified, Policy-makers
Cambiar la planificación y políticas del transporte (C)
Mejorar instalaciones deportivas comunitarias (C)
(UNAPPRAISED) Recursos para monitorear la actividad física (D)
Controlar las ventas de alimentos en instituciones públicas (C)
Subsidios en alimentos saludables (C)
Impuestos en alimentos que promueven la obesidad (C)
(UNAPPRAISED) Controles en la composición de alimentos (D)
(UNAPPRAISED) Incentivos para mejorar la composición de alimentos (D)
Proveer el suministro de menús saludables (D)
Etiquetado de información nutricional obligatorio (C)
Controlar la publicidad de alimentos y bebidas (C)
Control de términos de comercialización (D)
(UNAPPRAISED) Mejorar el entrenamiento para los profesionales de la salud (D)
Mejorar la educación en salud (D)
Educación en alimentos y salud (D)
(UNAPPRAISED) Más investigación en obesidad (D)
(UNAPPRAISED) Medicación para control de peso (D)
(UNAPPRAISED) Sustitutos para grasa y azúcar (D)
Nuevo organismo gubernamental (D)
Reforma de la política agrícola común (D)
0 10 20 30 40 50 60 70 80 90 100


Scores for Economic impact unspecified, Public providers
Cambiar la planificación y políticas del transporte (C)
Mejorar instalaciones deportivas comunitarias (C)
(UNAPPRAISED) Recursos para monitorear la actividad física (D)
Controlar las ventas de alimentos en instituciones públicas (C)
Subsidios en alimentos saludables (C)
Impuestos en alimentos que promueven la obesidad (C)
Controles en la composición de alimentos (D)
(UNAPPRAISED) Incentivos para mejorar la composición de alimentos (D)
(UNAPPRAISED) Proveer el suministro de menús saludables (D)
Etiquetado de información nutricional obligatorio (C)
Controlar la publicidad de alimentos y bebidas (C)
Control de términos de comercialización (D)
(UNAPPRAISED) Mejorar el entrenamiento para los profesionales de la salud (D)
Mejorar la educación en salud (D)
Educación en alimentos y salud (D)
Más investigación en obesidad (D)
(UNAPPRAISED) Medicación para control de peso (D)
(UNAPPRAISED) Sustitutos para grasa y azúcar (D)
(UNAPPRAISED) Nuevo organismo gubernamental (D)
Reforma de la política agrícola común (D)
0 10 20 30 40 50 60 70 80 90 100


Scores for Economic impact unspecified, Public health specialists
Cambiar la planificación y políticas del transporte (C)
Mejorar instalaciones deportivas comunitarias (C)
(UNAPPRAISED) Recursos para monitorear la actividad física (D)
Controlar las ventas de alimentos en instituciones públicas (C)
Subsidios en alimentos saludables (C)
Impuestos en alimentos que promueven la obesidad (C)
(UNAPPRAISED) Controles en la composición de alimentos (D)
(UNAPPRAISED) Incentivos para mejorar la composición de alimentos (D)
(UNAPPRAISED) Proveer el suministro de menús saludables (D)
Etiquetado de información nutricional obligatorio (C)
Controlar la publicidad de alimentos y bebidas (C)
(UNAPPRAISED) Control de términos de comercialización (D)
Mejorar el entrenamiento para los profesionales de la salud (D)
Mejorar la educación en salud (D)
Educación en alimentos y salud (D)
Más investigación en obesidad (D)
(UNAPPRAISED) Medicación para control de peso (D)
(UNAPPRAISED) Sustitutos para grasa y azúcar (D)
(UNAPPRAISED) Nuevo organismo gubernamental (D)
(UNAPPRAISED) Reforma de la política agrícola común (D)
0 10 20 30 40 50 60 70 80 90 100

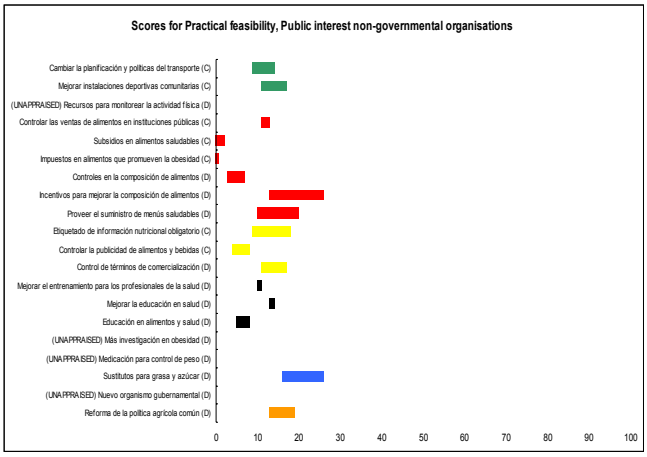
Practical Feasibility:



For the result Practical feasibility, options Change Planning and Transport Policies, Devices to Monitor Physical activity, subsidies on healthy foods, and taxes on obesity—promoting foods are the lowest scored ones. Whilst the best scored ones are Food and health education, incentives to improve food composition and medication for weight control. When interpreting the very high score of this last option, the graphs must be broken into perspectives to realize that only one participant scores this option, which is reflected with the same value in the general graph.
A deeper analysis can be done when examining the options for the result Societal Benefits according to each one of the perspectives:

For this result the perspective of policy planning has not been taken into account in so far as for this category any criterion was included.

The low score given by the perspective Ssmall food and fitness commercial organisations to the options related to the promotion of physical activity must be highlighted. The group of informational initiatives for this result receives a good score for all the perspectives with the exception for the Public health specialists.


Scores for Practical feasibility, Public interest non-governmental organisations
Cambiar la planificación y políticas del transporte (C)
Mejorar instalaciones deportivas comunitarias (C)
(UNAPPRAISED) Recursos para monitorear la actividad física (D)
Controlar las ventas de alimentos en instituciones públicas (C)
Subsidios en alimentos saludables (C)
Impuestos en alimentos que promueven la obesidad (C)
Controles en la composición de alimentos (D)
Incentivos para mejorar la composición de alimentos (D)
Proveer el suministro de menús saludables (D)
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(UNAPPRAISED) Nuevo organismo gubernamental (D)
Reforma de la política agrícola común (D)
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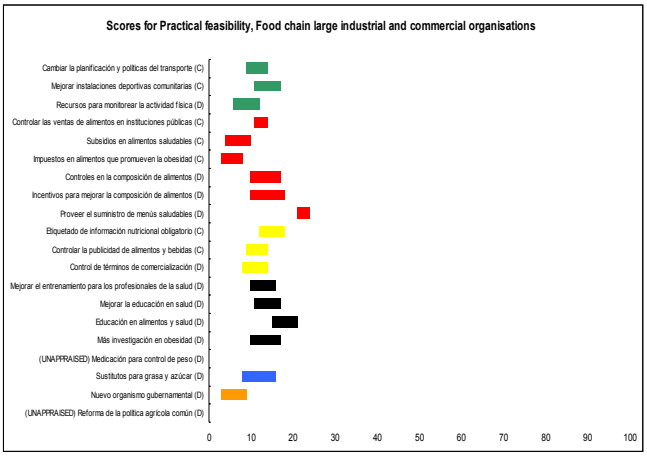
Scores for Practical feasibility, Food chain large industrial and commercial organisations
Cambiar la planificación y políticas del transporte (C)
Mejorar instalaciones deportivas comunitarias (C)
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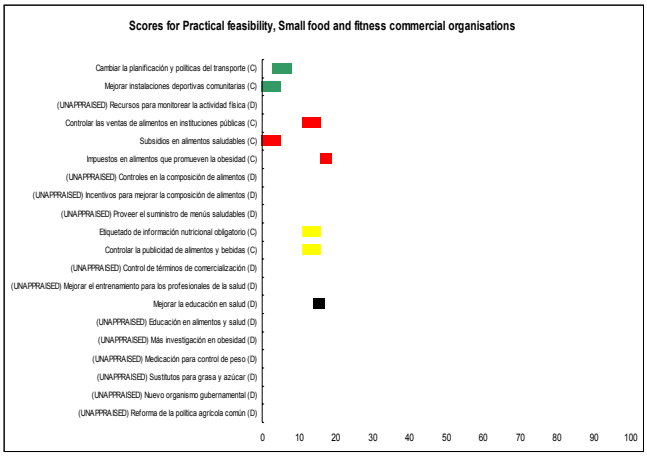
Scores for Practical feasibility, Small food and fitness commercial organisations
Cambiar la planificación y políticas del transporte (C)
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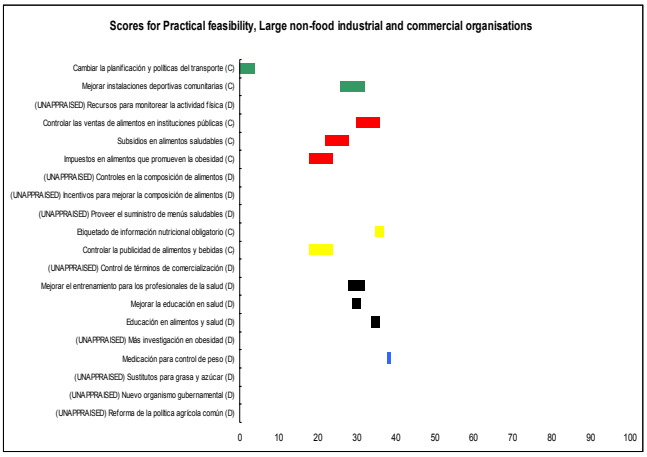
Scores for Practical feasibility, Large non-food industrial and commercial organisations
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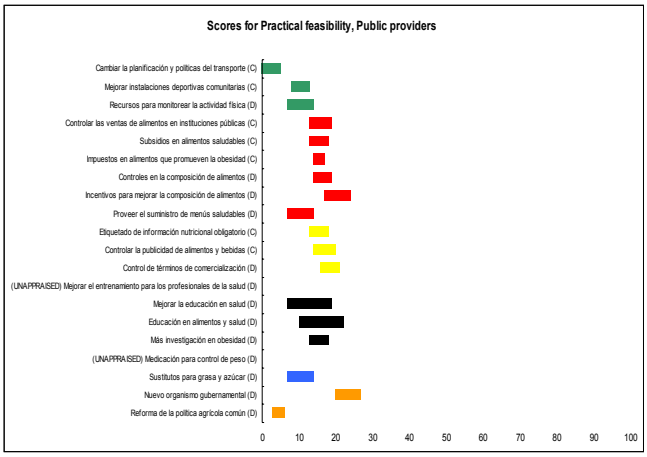
Scores for Practical feasibility, Public providers
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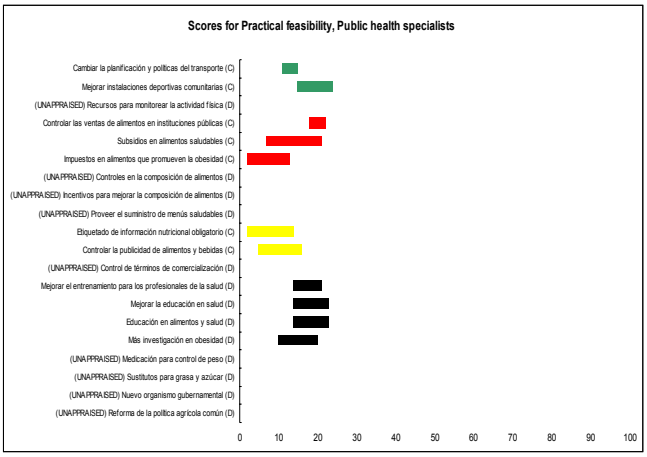
Scores for Practical feasibility, Public health specialists
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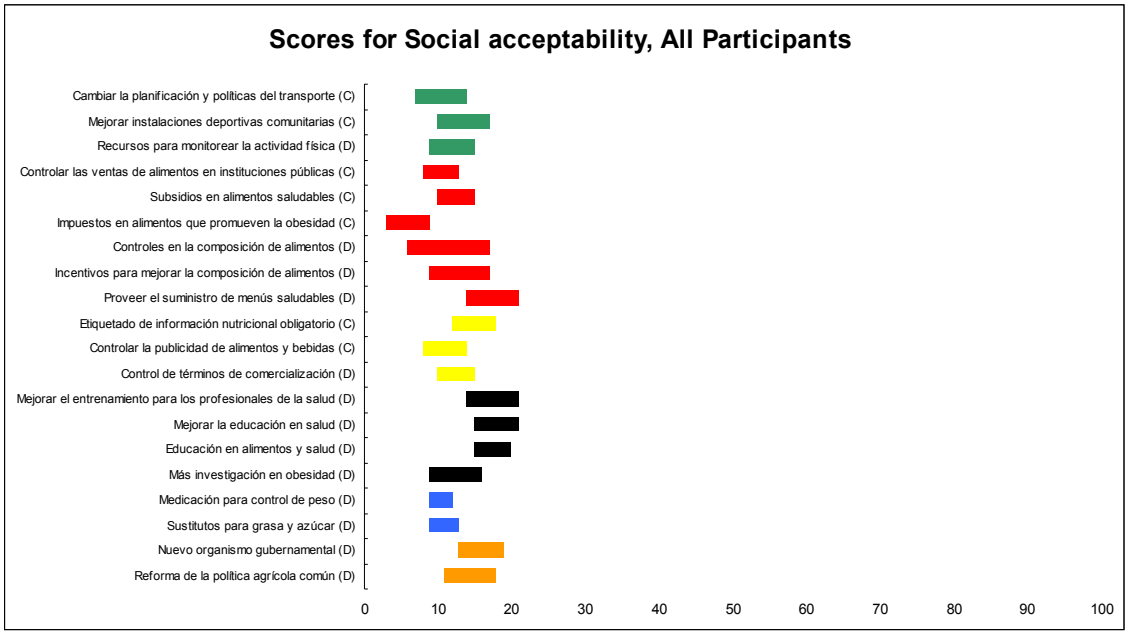
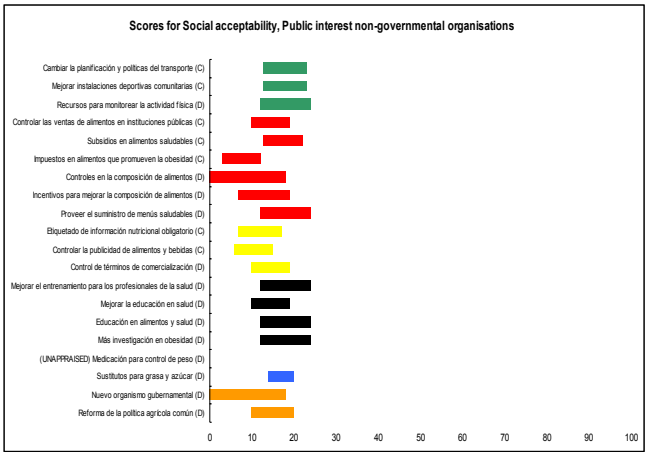
Social acceptability



According to the result Social Acceptability, the options with the worst score are the following: Taxes on obesity-promoting foods, and controls on foods composition belonging to the group Modififying the supply of and demannd for foodstuffs. On the contrary, options Incentives for caterers to provide healthier menus and the ones related to educational initiatives, Improve health education, Improve training of health professionals and Food and health education show good scores.

A deeper analysis can be done for the result Societal Benefits for each one of the perspectives:

For this result the perspective of Food chain large industrial and commercial organisations has not been taken into account in so far as for this category any criterion was included.
The low score of option Controls on foods composition under this result, reflects the score of the Public Interest non-governments organizations. The option incentives for caterers to provide healthier menus stands out for its good score compared to all the perspectives under this result.


Scores for Social acceptability, Public interest non-governmental organisations
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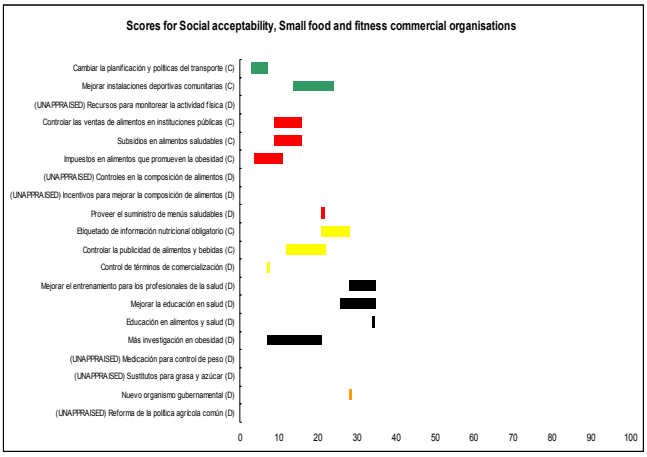
Scores for Social acceptability, Small food and fitness commercial organisations
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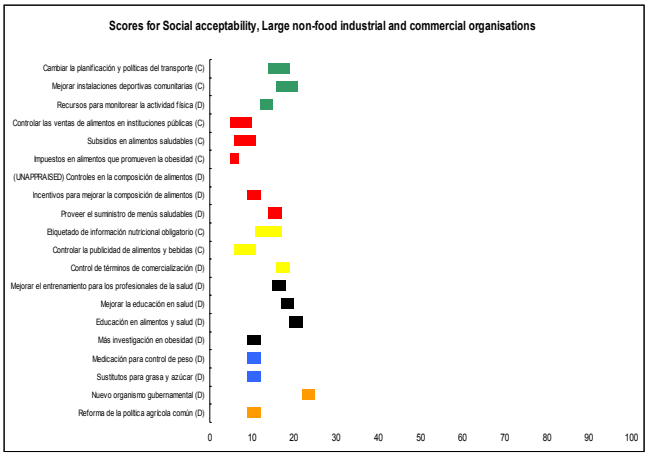
Scores for Social acceptability, Large non-food industrial and commercial organisations
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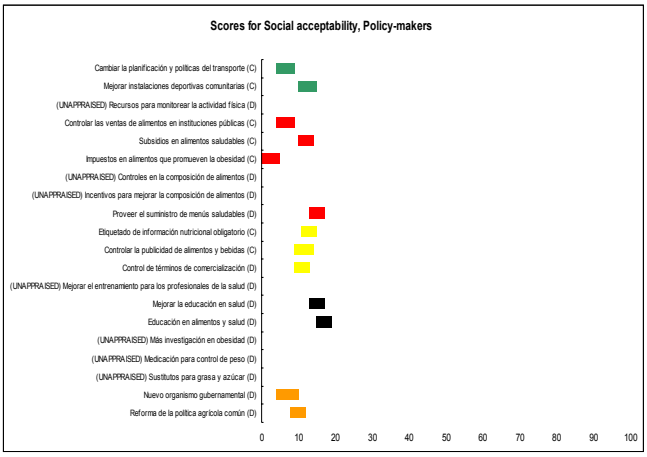
Scores for Social acceptability, Policy-makers
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Mejorar instalaciones deportivas comunitarias (C)
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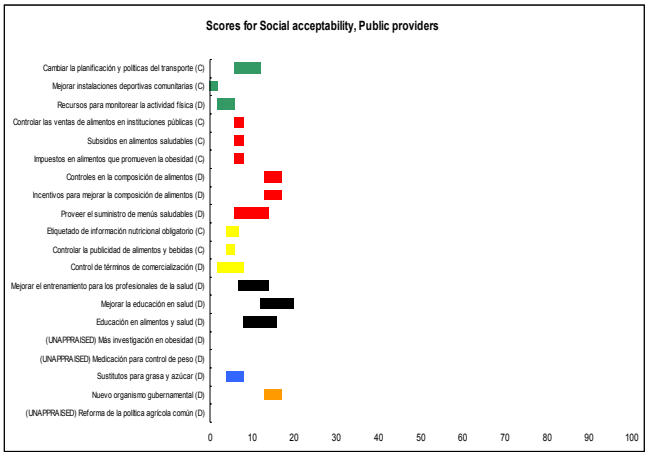
Scores for Social acceptability, Public providers
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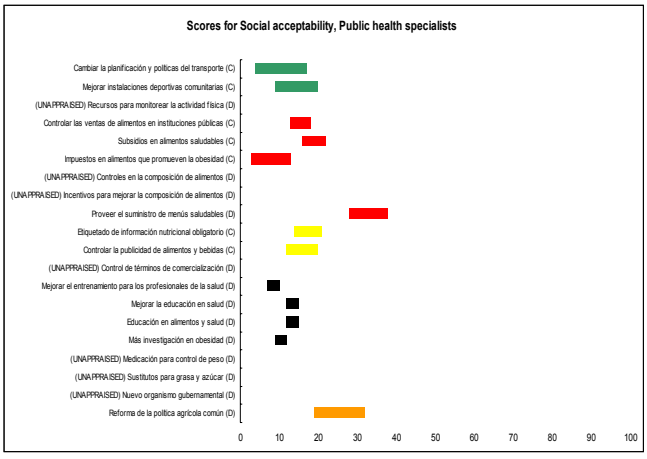
Scores for Social acceptability, Public health specialists
Cambiar la planificación y políticas del transporte (C)
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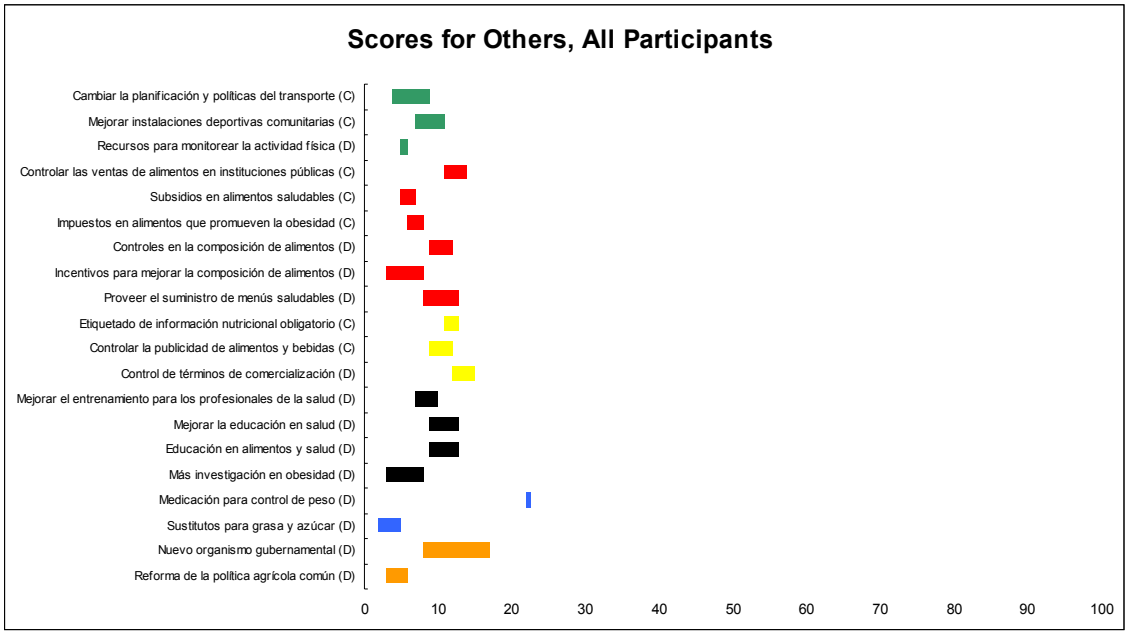
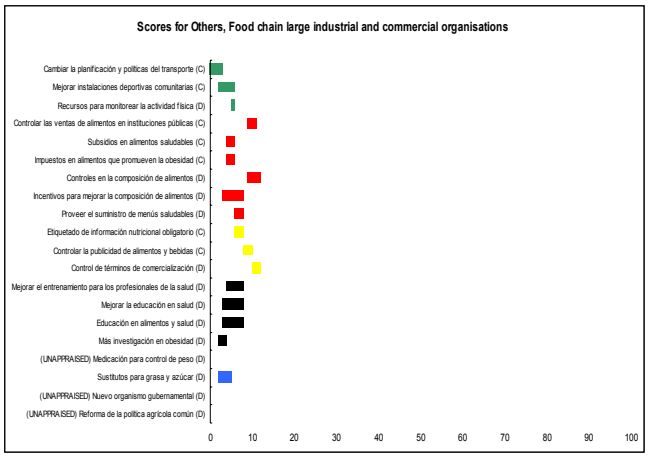
Others



To analyze this result it must be taken into account that category “Others” is composed by a set of different criteria, therefore conclusions are a little imprecise for the result.

According to the result “Others”, there are many options with a bad score: substitutes for fat and sugar, incentives to Improve food composition, More obesity research and Common agricultural policy reform. However, the options with a good score are the following: New Government Body, Control of marketing terms, and Medication for weight control. Again, it must be said that this last option has only been scored by one participant, therefore it has to be analyzed with a certain attention.


Scores for Others, Food chain large industrial and commercial organisations
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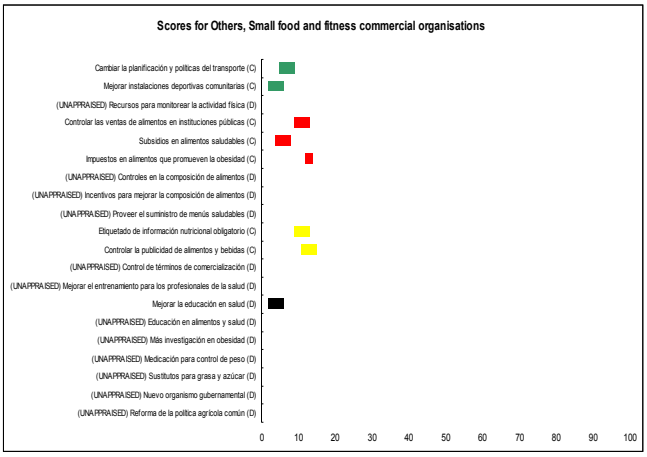
Scores for Others, Small food and fitness commercial organisations
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(UNAPPRAISED) Reforma de la política agrícola común (D)
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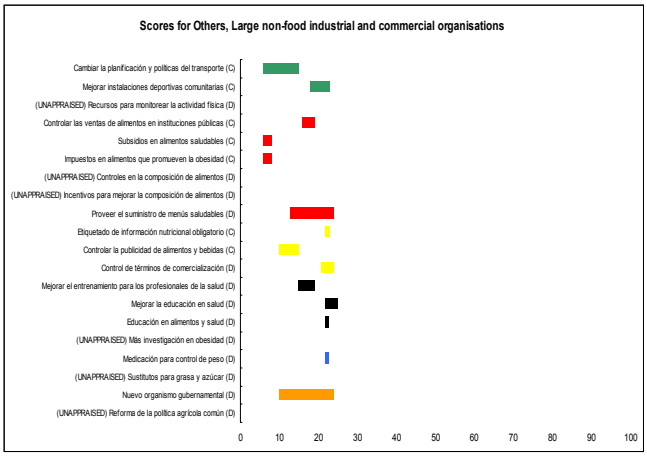
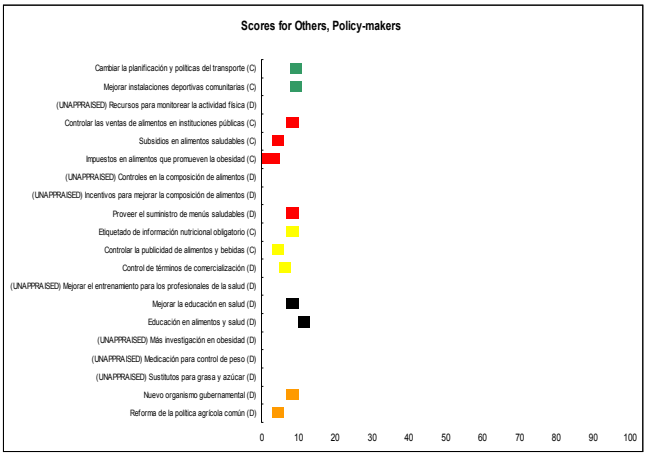
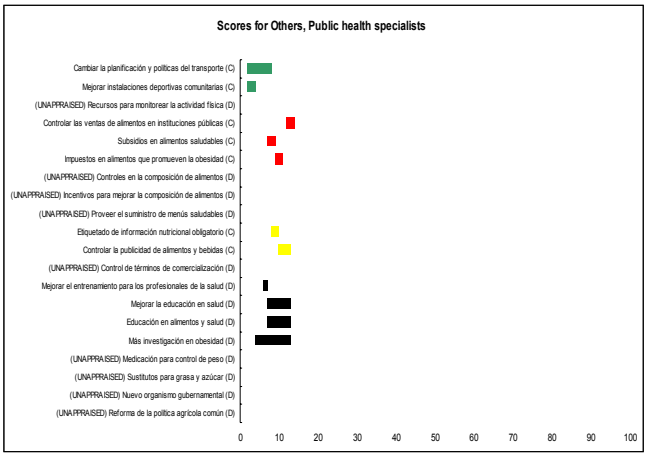

Scores for Others, Large non-food industrial and commercial organisations
Cambiar la planificación y políticas del transporte (C)
Mejorar instalaciones deportivas comunitarias (C)
(UNAPPRAISED) Recursos para monitorear la actividad física (D)
Controlar las ventas de alimentos en instituciones públicas (C)
Subsidios en alimentos saludables (C)
Impuestos en alimentos que promueven la obesidad (C)
(UNAPPRAISED) Controles en la composición de alimentos (D)
(UNAPPRAISED) Incentivos para mejorar la composición de alimentos (D)
Proveer el suministro de menús saludables (D)
Etiquetado de información nutricional obligatorio (C)
Controlar la publicidad de alimentos y bebidas (C)
Control de términos de comercialización (D)
Mejorar el entrenamiento para los profesionales de la salud (D)
Mejorar la educación en salud (D)
Educación en alimentos y salud (D)
(UNAPPRAISED) Más investigación en obesidad (D)
Medicación para control de peso (D)
(UNAPPRAISED) Sustitutos para grasa y azúcar (D)
Nuevo organismo gubernamental (D)
(UNAPPRAISED) Reforma de la política agrícola común (D)
0 10 20 30 40 50 60 70 80 90 100


Scores for Others, Policy-makers
Cambiar la planificación y políticas del transporte (C)
Mejorar instalaciones deportivas comunitarias (C)
(UNAPPRAISED) Recursos para monitorear la actividad física (D)
Controlar las ventas de alimentos en instituciones públicas (C)
Subsidios en alimentos saludables (C)
Impuestos en alimentos que promueven la obesidad (C)
(UNAPPRAISED) Controles en la composición de alimentos (D)
(UNAPPRAISED) Incentivos para mejorar la composición de alimentos (D)
Proveer el suministro de menús saludables (D)
Etiquetado de información nutricional obligatorio (C)
Controlar la publicidad de alimentos y bebidas (C)
Control de términos de comercialización (D)
(UNAPPRAISED) Mejorar el entrenamiento para los profesionales de la salud (D)
Mejorar la educación en salud (D)
Educación en alimentos y salud (D)
(UNAPPRAISED) Más investigación en obesidad (D)
(UNAPPRAISED) Medicación para control de peso (D)
(UNAPPRAISED) Sustitutos para grasa y azúcar (D)
Nuevo organismo gubernamental (D)
Reforma de la política agrícola común (D)
0 10 20 30 40 50 60 70 80 90 100


Scores for Others, Public health specialists
Cambiar la planificación y políticas del transporte (C)
Mejorar instalaciones deportivas comunitarias (C)
(UNAPPRAISED) Recursos para monitorear la actividad física (D)
Controlar las ventas de alimentos en instituciones públicas (C)
Subsidios en alimentos saludables (C)
Impuestos en alimentos que promueven la obesidad (C)
(UNAPPRAISED) Controles en la composición de alimentos (D)
(UNAPPRAISED) Incentivos para mejorar la composición de alimentos (D)
(UNAPPRAISED) Proveer el suministro de menús saludables (D)
Etiquetado de información nutricional obligatorio (C)
Controlar la publicidad de alimentos y bebidas (C)
(UNAPPRAISED) Control de términos de comercialización (D)
Mejorar el entrenamiento para los profesionales de la salud (D)
Mejorar la educación en salud (D)
Educación en alimentos y salud (D)
Más investigación en obesidad (D)
(UNAPPRAISED) Medicación para control de peso (D)
(UNAPPRAISED) Sustitutos para grasa y azúcar (D)
(UNAPPRAISED) Nuevo organismo gubernamental (D)
(UNAPPRAISED) Reforma de la política agrícola común (D)
0 10 20 30 40 50 60 70 80 90 100

Section 11 Mapping option performance

11.1 Introduction

When concluding the process of each one of the interviews the computer generates a simple graph showing all the options that is to say the scores and weight of the criteria, these are the total ranges for the different options.
The final result is a detailed graph of the representation of all the options that the participant defined previously, it shows their options of the criteria, technical trials on the operation of the options under those criteria, uncertainties and subjective priorities, relating to the relative importance of the diverse criteria.

Afterwards, these MCM results are compared with those of other participants contained by their perspectives, it is to look for likeness and differences and to consider the coincidences on the different options and perspectives. The options are presented in a standard order in each one of the graphics. With each group of colours the groupings of the options are represented, summarized here:

Table Options grouped into clusters

A. Exercise and physical activity-oriented (coloured green)
1. Change planning and transport policies
2. Improve communal sports facilities
20. Increase the use of physical activity monitoring devices

B. Modifying the supply of, and demand for, foodstuffs (coloured red)
4. Control sales of foods in public institutions
6. Provide subsidies on healthy foods
7. Impose taxes on obesity-promoting foods
11. Control the composition of processed food products
12. Provide incentives to improve food composition
14. Provide incentives to caterers to provide healthier menus

C. Information-related initiatives (coloured yellow)
3. Controls on food and drink advertising
5. Require mandatory nutrition labelling
19. Control the use of marketing terms (‘diet’, ‘light’ etc)

D. Educational and research initiatives (coloured black)
8. Improve training for health professionals in obesity care and prevention
10. Improve health education for the general public
15. Include food and health in the school curriculum
13. Increase research into obesity prevention and treatment

E. Technological innovation (coloured blue)
16. Increase the use of medication to control bodyweight
17. Increase the use of synthetic fats and artificial sweeteners

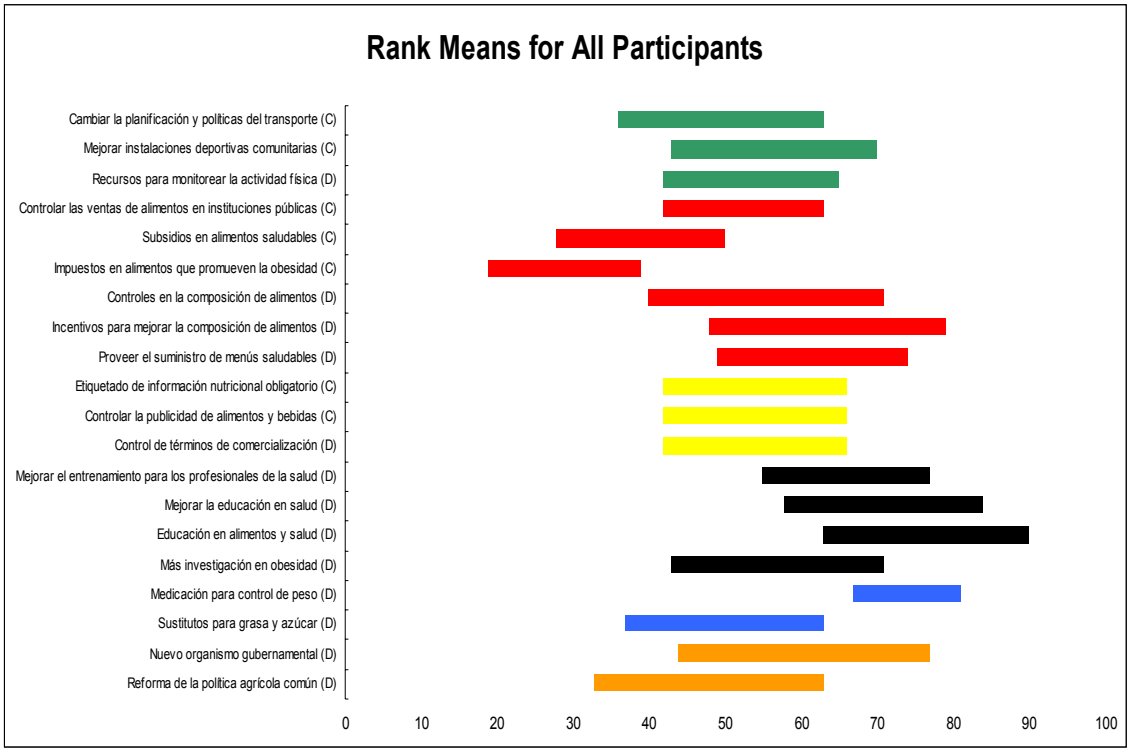
F. Institutional reforms (coloured orange)
9. Reform the Common Agricultural Policy to support nutritional targets
18. Create a new governmental body to co-ordinate policies on obesity

G. Additional options (coloured mauve)

11.2 The overall picture

The figure below shows the average of the pessimistic (left-hand end of bar) and optimistic (right-hand end of bar) ranks given by all participants combined. The appropriate interpretation of the graphics that refer to all the participants, should include the revision and analysis of the individual results and for groupings of the different sections of this report, notably the loss of information provide by averaging across participants, and the conditionality of the scores which compress the ranks (this conditionality is determined by a combination of the difference between optimistic and pessimistic scores both within a participant's ranking under different criteria and across the participants when their ranks are combined).

Fig Average ranks for all participants combined



The figure allows several interpretations. Looking at the average ranks given by participants under the most optimistic scenarios, the most popular options are those in the cluster of educational and research initiatives (coloured in black) followed by the first two options concerning "improve communal sports facilities and provide incentives to improve food composition". As has been suggested in the last sections, these options are considered by their capacity to influence in the life styles without arriving to coercive actions, they enjoy wide social acceptability and their application also allows to embrace a great number of people, making special emphasis in the childhood population, what would rebound in the long term population's nutritional profile.
Although the option about "medication to the control of weight" appears like one of those more popular, it is important to remember the need for careful interpretation of this type of graphics, because the representation picks up the acertaiment of a participant.

Many options are given intermediate scores under optimistic scenarios, including several of the options to intervene in supply and demand for food: controls on composition of foods and provide healthier menus (coloured red). There is consistent support for information-related initiatives including “improved food labelling” and “controls on foods advertising” and “control the use of marketing terms” (coloured yellow). A similar level of support is also evident for the “changes planning and transport policies” and “resources to monitor phiysical activity”, “Controlling sales of foods in public institutions”, “subsidies on healthy foods”, and “Common Agricultural Policy reform”.

The option about” subsidies on healthier foods” scored poorly under optimistic scenarios, as we mentioned this was an option rejected by several of the participants, as unsustainable. Taxation on obesogenic foods were low too, because is impossible to differentiate the foods that are going to consider themselves like healthful .

When taking in consideration the pessimistic scenario is important to remark that the initiative about of taxes on obesogenic foods corresponds to those with low averages of the punctuation as much the optimistic ends as for the pessimistic so we confirm the opinion of the participants regarding the inability of this measure to modify the food habits. Besides, the option on” subsidies” shows an significantly low punctuation, which shows the opinion of the participants related with their disagreement with the application of the financial measures in the obesity problem, so those were the initiatives classified as unfavourable.

Considering the same options as scored under pessimistic scenarios, a similar interpretation can be given. Educational initiatives came out best (except more research into obesity).

Several options showed both high scores under optimistic conditions and low scores under pessimistic conditions: Transport and planning initiatives, Improve the use of physical activity monitoring devices, Controlling sales of foods in public institutions, initiatives related with information, Increase the use of synthetic fats and artificial sweteners and common Agricultural Policy reform, in part because the option could be interpreted as a being diffult to introduce due to the hight cost, economic and politics interest . Also because they depend on the political will of the decision making bodies. In general term we observed the same in the other initiatives, what could show the degree of difficulty or facility to introduce them into a system.

Optimistic and pessimistic conditions for appraisal scores

The differences between optimistic and pessimistic scoring of options can be explored in more detail by examining the extreme values given by participants (showing the spread between the very lowest score given by any participant and the very highest score given by any participant) as shown in the figure below, and by examining the indicator of uncertainty in scoring (showing as an amount the degree of variation in scoring under different criteria within each participant and combined across all participants).

Fig. Extremes of ranks for each option, taking in all participants

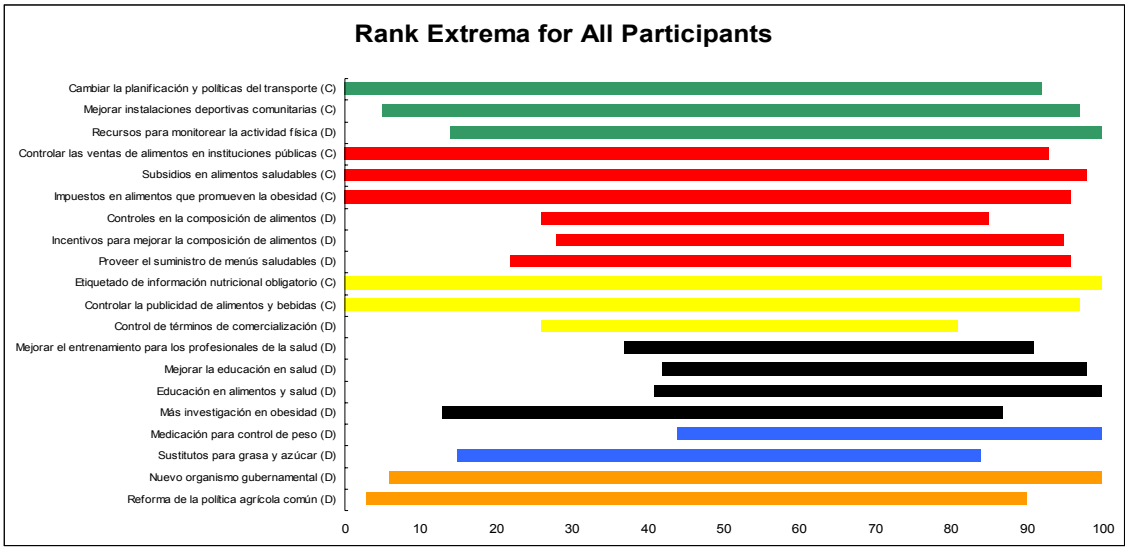
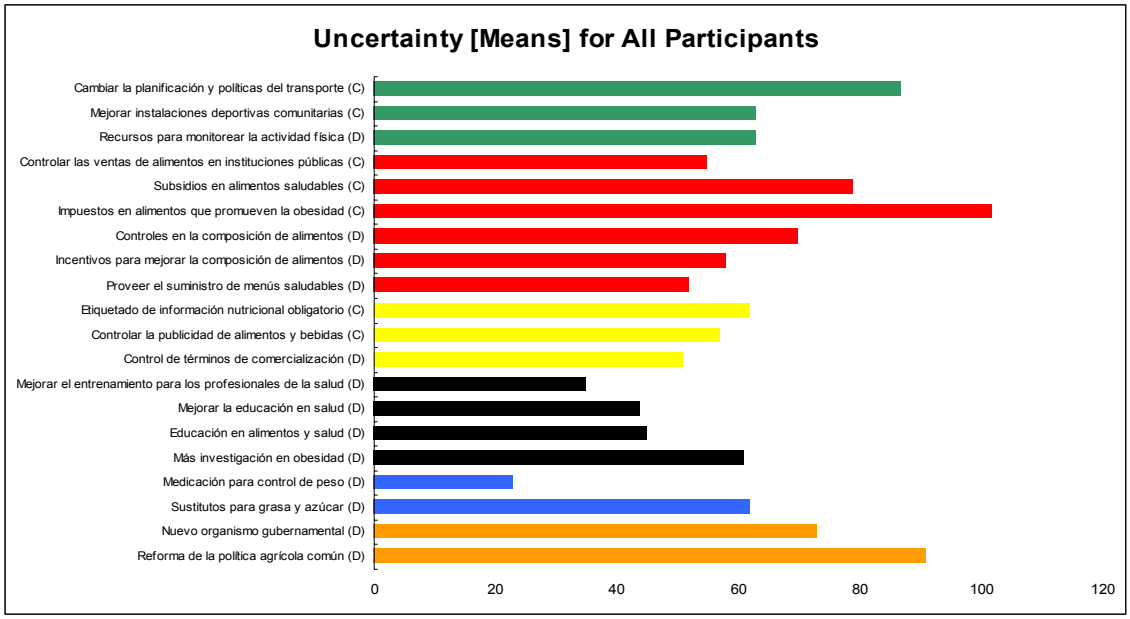


Fig. Conditionality of ranks within and across all participants



The extremes of ranks and the uncertainty evidence the doubts in the options contained as initiatives Exercise and physical activity- oriented, Institutional reforms and some of the options contained in the Modifying the supply of, and demands for foodstuffs: controlling sales of foods in public institutions, subsidies on healthy foods and taxes on obesity-promoting foods.

The initiatives with those that the participants evidence a bigger grade of uncertainty are the taxes on obesogenic foods, continued by the option on “Common Agricultutal Policy reform”, and “Change planning and transport policies”. Again, the option which has lower score is one related with “Medication to control weight” (this doesn't surprise for the reasons explained previously), they stand out the educational initiatives as the grouping with smaller uncertainty.

11.3 Analysis of option ranks within perspectives

In this part the comparison of scores is shown as given by the participants grouped in perspectives for different options. A representation of these results by participant can be seen in table zz. Furthermore, a summary representation of the valuing of the options by perspective can be seen in table Z1
The participants grouping in Spain can be seen in the following summary table:

Table. Spain's participants grouped in perspectives.

Perspectives Participant	Category
A. Public Interest Non-Government Organizations	7 Consumers groups 19 Public Health NGOs 20 Public interest sport and fitness NGOs 21 Trade Union
B. Food chain large industrial and commercial organisations	1 Farming industry 2 Food processing company 3 Large commercial catering chains 4 Large food retailers
C. Small food and fitness commercial organisations	5 Small health food retailers 13 Commercial sports or fitness providers
D. Large non-food industrial and commercial organisations.	12 Life insurance industry 17 Advertising industry 18 Pharmaceutical industry
E. Policy makers	8 Senior official government policy makers in health ministry. 9 Senior official government policy makers in finance ministry.
F. Public providers	6 Public sector caterers 11 Town and transport planners 14 School teachers
G. Public Health specialists	10 Public health professionals 15 menbers of expert nutrition/obesity advisory committees 16 Health journalists

A. Public Interest Non Governmental organisations

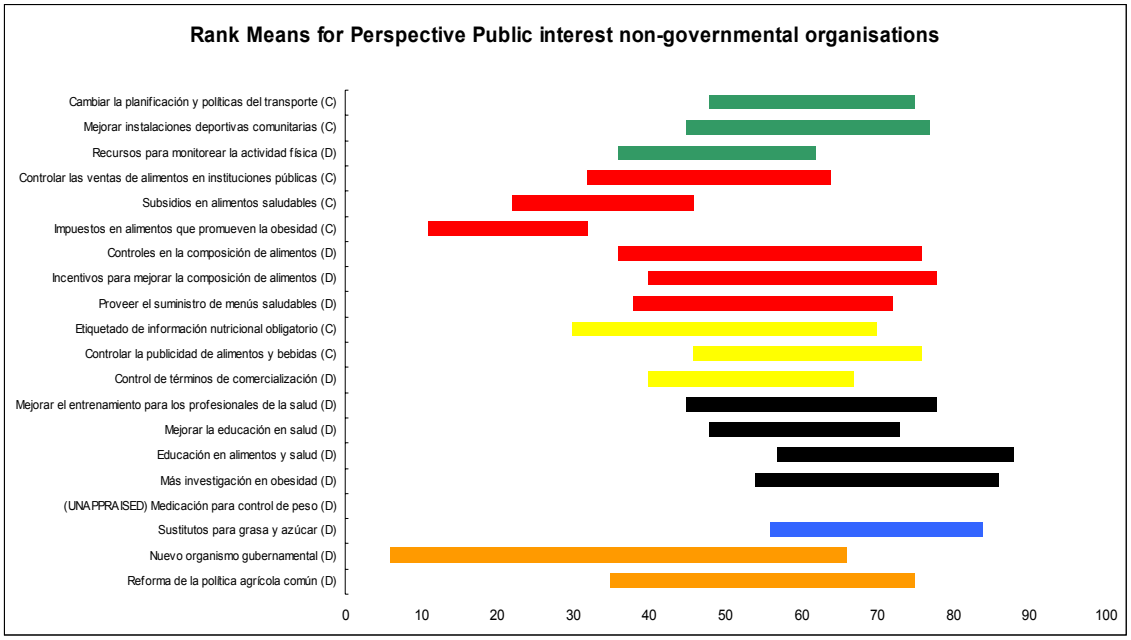
The graphs show in general combined measures of the participants optimists scoring (right end of every bar) and pessimists (left end of every bar) for each one of the options.

From the optimist point of view, this perspective gave favourable scores to Health and food Education, More Research into Obesity, Incentives to Improve Food Composition, Improve Communal Sports Facilities and Substitutes for Fats and Sugar.

On the contrary, under the pessimists, the low praised average scores were assigned to Taxes on obesity-promoting food, subsidies on healthy foods, and creation of a new government body.

The core options orientated to exercise and physical activity and the educational options coincide under an optimist scenario in a medium scoring trend- high for al participants of this perspective. The Medication option for the weight control was not valued by any of the participants. The options on Devices to Monitor the physical activity, More research into obesity, Substitutes for fat and sugar and New government body were only valued by one of the members of this group. Hence, the resulting graph of the perspective shows as group result the particular scorings. In general terms, the participants in particular do not agree on identifying a same group of options as priorities.

Fig. Medium ranks for all participants in Perspective A. Public interest Non Governmental Organisations.



Members of this group express different points of view which are described below for each one of the participants. Three of the participants include additional options, agreeing on the need to include one option that covers and facilitates aspects on healthier food. The additional options suggested are: Control Of The Size Of Rations, Promotional Gifts To Promote Consumption, Nutritional Labeling By Consensus, Outdoor Physical Activity, Healthier Food, Healthy Canteens And Lodging And Ideal Affordable Food.

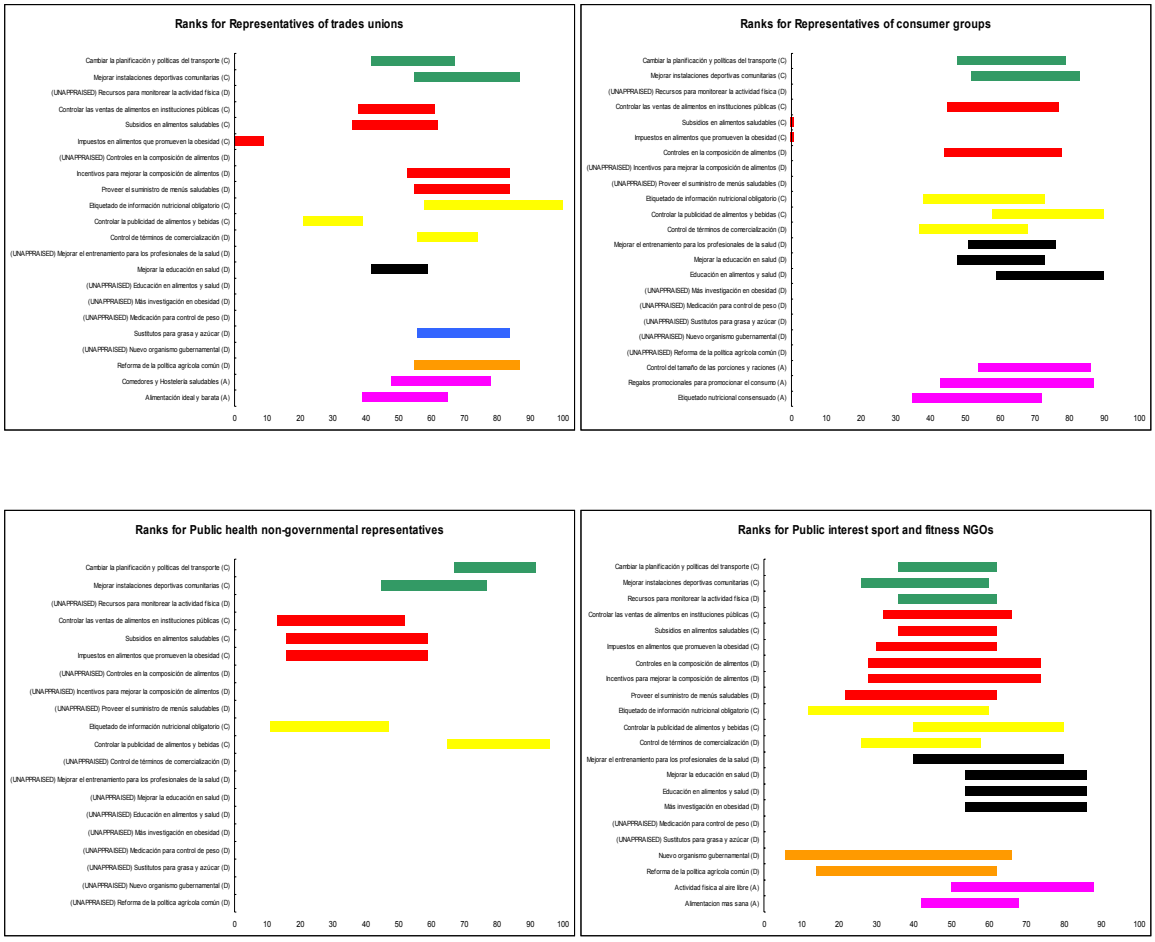
- Representative of Consumers group. En general all options show high performance under positive scenarios, being priorities in their judgment the Control Of Food And Drink Advertising, and Health and Food Education. Under negative scenarios, the initiatives on subsidies on healthy foods and taxes on obesity –promoting food show the lowest possible score.

- Public health non-governmental Representative: the participant lady only valued the core options, ignoring the discretional ones. The options with higher scoring under positive scenarios are Change of Planning and Transport Policies, and Control of Food and Drink Advertising, followed by Improve The Communal Sports Facilities. It must be said that the rest of the options are valued under a pessimist scenario and with a wide extension, reflecting the unfavourable opinion of the participant in relation to his application.

- Public Interest sport and fitness NGOs . In this case high scoring can be seen under positive scenarios for the policy initiatives on education: More Research Into Obesity, Improved Health Education and Food, and Health Education, followed by the rank to Improve training for health professionals and controls on food and drink. The classification for the grouping of options orientated to the exercise and the physical activity, modification of the supply and demand of food and the information initiatives, show coincidences in a medium point of the scale. The options orientated to the institutional reforms reflect a pessimist valuing along with a higher degree of uncertainty and variability. This participant has included in his valuing most of the discretional options.

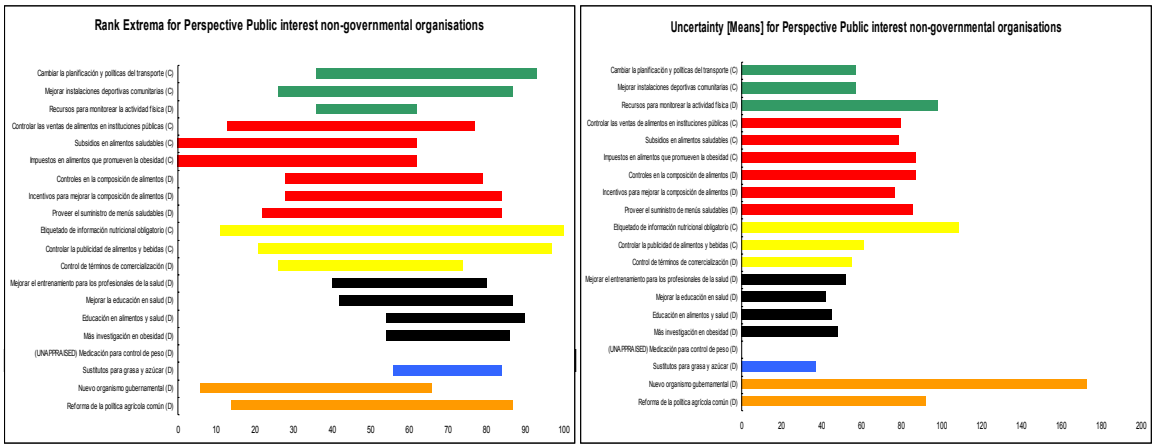
- Representatives of Trades Union. The Mandatory Nutritional Information Labeling classified in the most favourable extreme of its rank under optimist conditions, offers as a whole the best option for the participant. The second option is composed by a common idea between Improve The Communal Sports Facilities, Common Agriculture Policy Reform, Incentives To Improve Food Composition, Provide Catering Of Healthy Menus And Substitutes For Fat And Sugar. Although in this group the first two options reflect a performance slightly better, it also shows a bit higher variability than the previous ones. In the most pessimist extreme there is the option on Taxes for obesity-promoting food, thus indicating the low performance for the participant of this option under pessimist conditions.

Fig. Individual Participants in the A Perspective: Public Interest Non – governmental Organisations



The extremes of score and uncertainty confirm the indecision regarding the implementation of options as creation of a New Government Body, Mandatory Nutritional Information Labeling, And Devices To Monitor The Physical Activity. Furthermore, the unfavourable option of this group regarding the fiscal measures is confirmed.

Fig. Extreme ranks and position for A Perspective: Public Interest Non – Governmental Organizations.



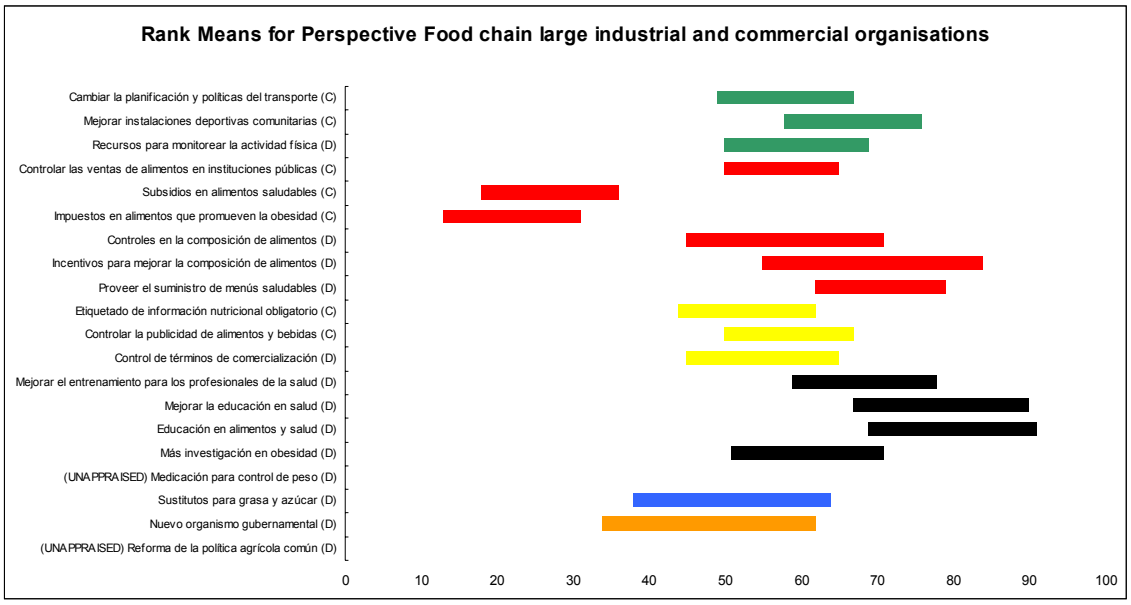
B. Food chain large industrial and commercial organisations

A remarkable fact for this option is that participants considered for their scoring almost all, the core options and the discretional ones, proposed which could be interpreted as a sample of special interest about the problem of obesity by the participants in this group.

The participants agree on a high classification under optimist conditions for the options belonging to the group of initiatives of education and investigation: Improved Health Education And Food and Health, Incentives to Improve The Food Composition, Supply Catering Of Healthy Menus And Improve Communal Sports Facilities. Low scores under optimist conditions were assigned to the Creation of a new Government Body and the Mandatory Nutritional Information Labeling.

On the contrary, low scorings can be seen as in optimists as in pessimist scenarios for the options of Taxes on obesity-promoting food and subsidies on health foods, being these the ones with the worst performed and having into account that the participant valued this last one positively.

Fig. Medium ranks for all participants in the B Perspective: Food chain large industrial and commercial organisations.



All participants added additional options to the initiatives scored. The Farming industry representative and new organization to co-ordinate food policies, not about obesity, food processors representative, proposal of a new form of labeling and nutrition and food production education, representatives of large commercial catering chains, education to educators, sustainable and healthy urbanism, Representatives of large food retailers, research on new healthy products.
The members of this group show a wide variety of points of view, the following figures show the average scores for each option and for the four participants.

Each one of the participants in this perspective is explained below, and the highest and lowest scores for each option are reflected:

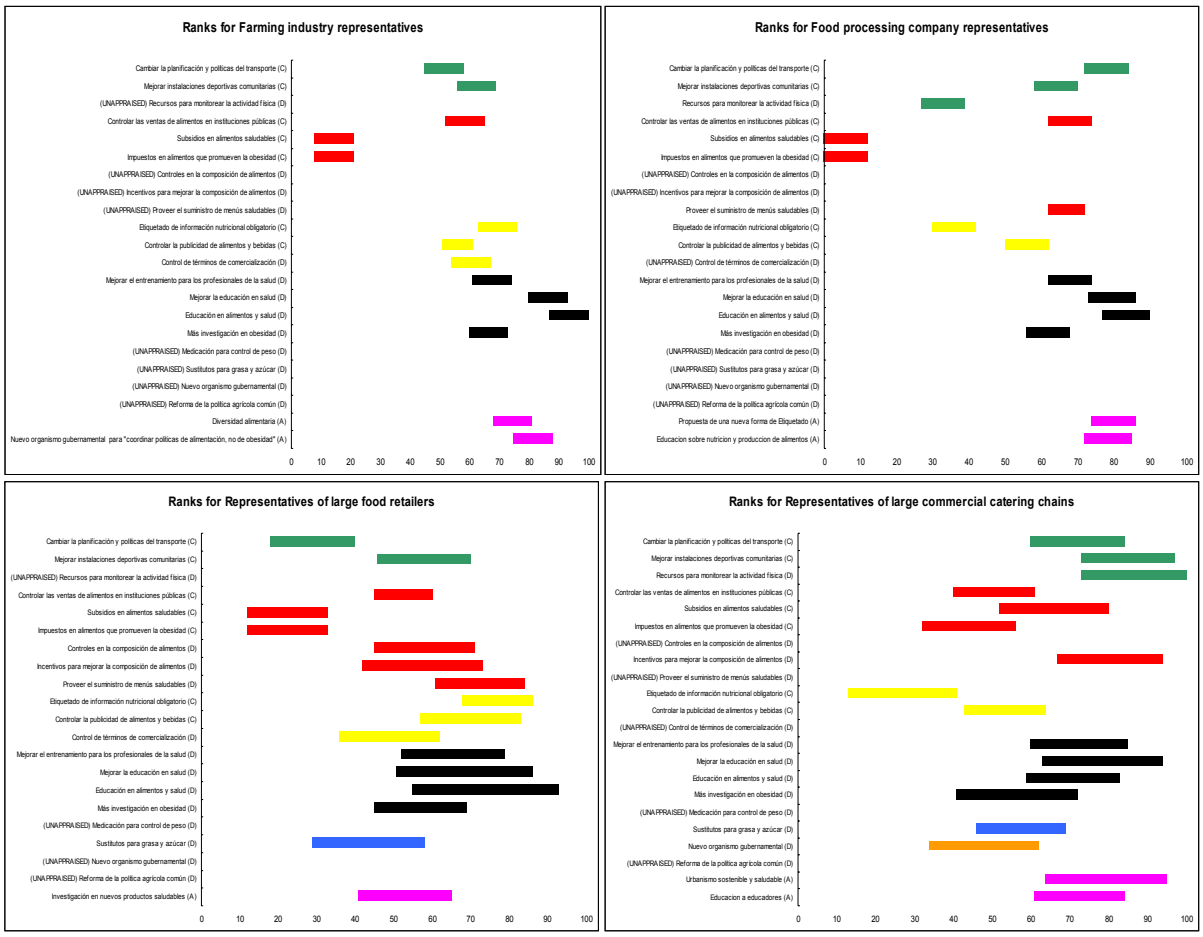
- Farming industry representative. This final result of categories show a clear difference between the relatively high ranks for the options Improved Health Education And Food and health Education, and a relatively low rank for Subsidies On Healthy Foods And Taxes On Obesity-Promoting Food. The other options show scoring medium-high very similar and with a close extension of the bars, similar for all the policy initiatives.

- Food processing company representatives. The options Food and health education and Improved Health education were under optimist scenarios the best valued ones by the participants, followed by Change planning and transport policies and by the additional options Labeling and education on nutrition and food production. It must be said that all options valued have a close degree of uncertainty. The options that show the lowest scores under pessimist scenarios are Subsidies on healthy food and taxes on obesity-promoting food, thus showing the participant his disagreement with these options.

- Large commercial catering chains. The participant shows a very high performance on optimist scenarios for the grouping of options orientated to exercise and physical activity (those with the highest scoring), and Change planning and transport policies. Furthermore, there are also other options with high performance: Sustainable and healthy Urbanism (additional option), Improved health education, incentives to improve food composition, and Improve training for health professionals. Under a pessimist scenario, the option with the lowest score is Mandatory nutritional information labeling.

- Representatives of large food retailers. The options of Subsidies on healthy foods and taxes on obesity-promoting foods are along with Change planning and transport policies, have the lowest score under pessimist scenarios. The options with the highest performance under optimist scenarios are: Food and health education, Improved health education (both with a high degree of uncertainty), along with the mandatory nutritional information labeling (with a low degree of uncertainty).

Fig. Individual Participants in the B Perspective. Food chain large industrial and commercial organisations



A wide extension of the scoring between the optimist and pessimist scenarios is seen through the options Subsidies on healthy foods, mandatory nutritional information labeling, change planning and transport policies transport and devices for monitoring physical activity. There is also a remarkable uncertainty for subsidies policies on healthy foods and taxes on obesity-promoting foods.

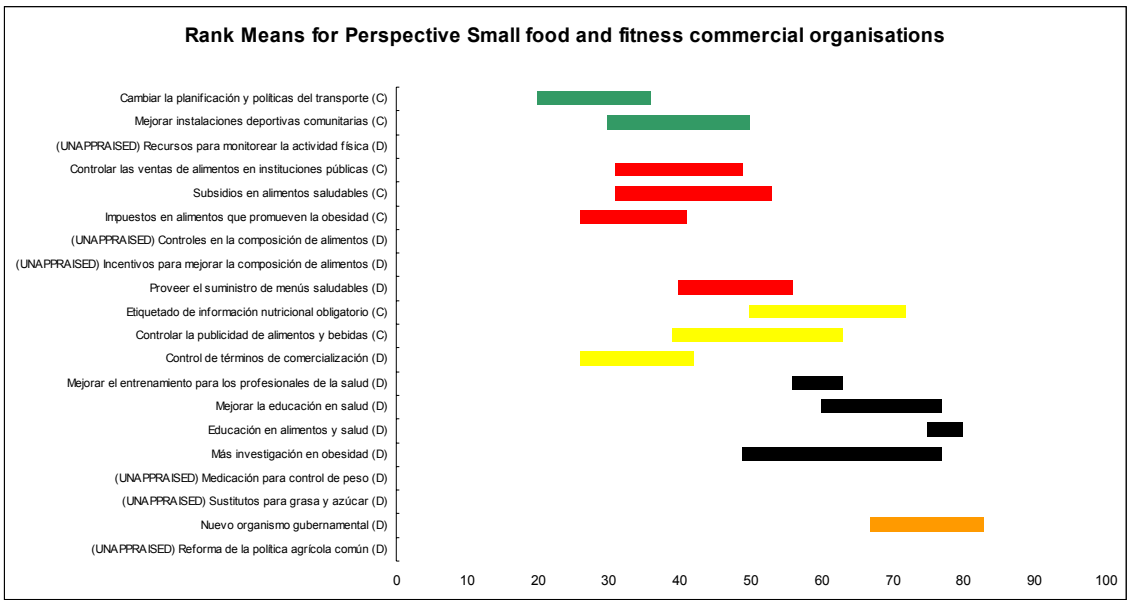
Fig. Extreme ranks and position for Position B: Food chain large industrial and commercial organisations.

C. Small food and fitness commercial organisations

In the analysis of this perspective favourable scores can be seen under optimist conditions to the educational initiatives and the option on creation of a new government organization. However, it is important to be careful in this interpretation in so far as with the exception of the option Improved health education, the other options are valued in a contradictory way or were not scored by the two participants of this category. This situation is evidenced in the individual graphs later shown.

The options Change Planning and transport policies, Tax On Obesity-Promoting Foods and Control the use of Marketing Terms are considered by both optimists and pessimists as the most favourable ones under this perspective.

Fig. Medium ranks for all participants in the perspective C. Small food and fitness commercial organisations.

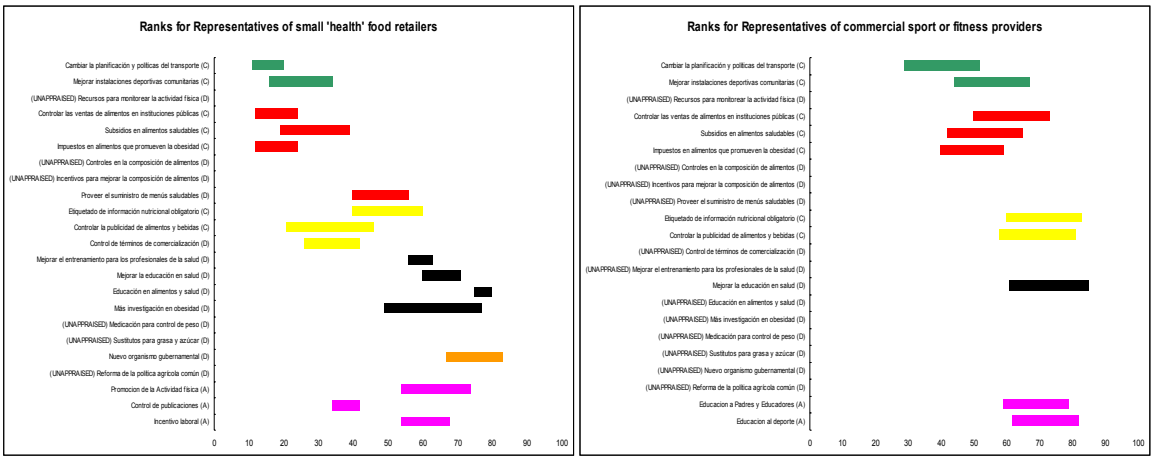


- Representatives of small"health" food retailers. The options Taxes On Obesity-Promoting Food, Subsidies on Healthy Food, and Controlling Sales on Food in Public Institutions belonging to the group of options Modifying the supply of demand for foodstuffs, are the ones with a lower performance. On the contrary, the options New Governmental Body, Food And Health Education (showing a little degree of uncertainty) show a high performance. It is that the participant agrees with them. When observing all the options as a whole it is possible to conclude that the participant disagrees or doesn't mind any of them (with the exception of those that receive the highest score).

- Representatives of commercial sport or fitness providers. In general, the scored options have a lower dispersion. It means that the options are concentrated with similar values and show a medium-high performance which

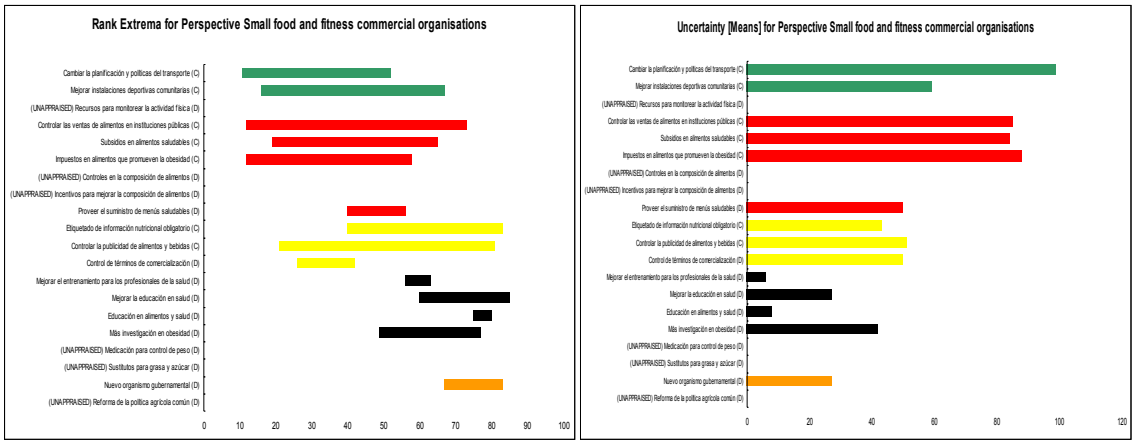
tells us about the agreement of the participant with them. In fact, the options with the highest performance are: Improved Health Education, Mandatory Nutritional Information Labeling, Sports Education, Parents and Educators Education, Controls Of Food And Drink Advertising. All of them have a medium degree of uncertainty, and due to the low dispersion coincide with almost all the options that show the worst performance: Taxes on Obesity-Promoting Foods, Subsidies on Healthy Foods and Change Planning and Transport Policies. This participant has left most of the discretional options without scoring.

Fig. Individual participants in the Perspective C. Small food and fitness commercial organisations.



The widest difference in the scoring between the optimist and pessimist contexts was shown in Controlling sales of foods in public institutions, Control food and drink advertising, Improve communal sports facilities. Furthermore, it shows the uncertainty for the options on Change planning and transport policiest, subsidies on healthy foods and taxes on obesity –promoting foods, and very low levels of uncertainty for the options Improve training for health professionals and Food and health education.

Fig. Extreme ranks and position for Perspective C. Small food and fitness commercial organisation



D. Large non-food industrial and commercial organisations

For this group, the option with better performance as a whole is Improved health education, followed by Improve communal sports facilities and the mandatory nutritional information labeling. In general terms, there was a valuing with a medium – high performance in almost all the options, being the options Taxes On Obesity-Promoting Food And Subsidies On Healthy Foods those with the lowest rank of performance.

Fig. Medium ranks for all the participants in Perspective D. Large non-food industrial and commercial organisations.

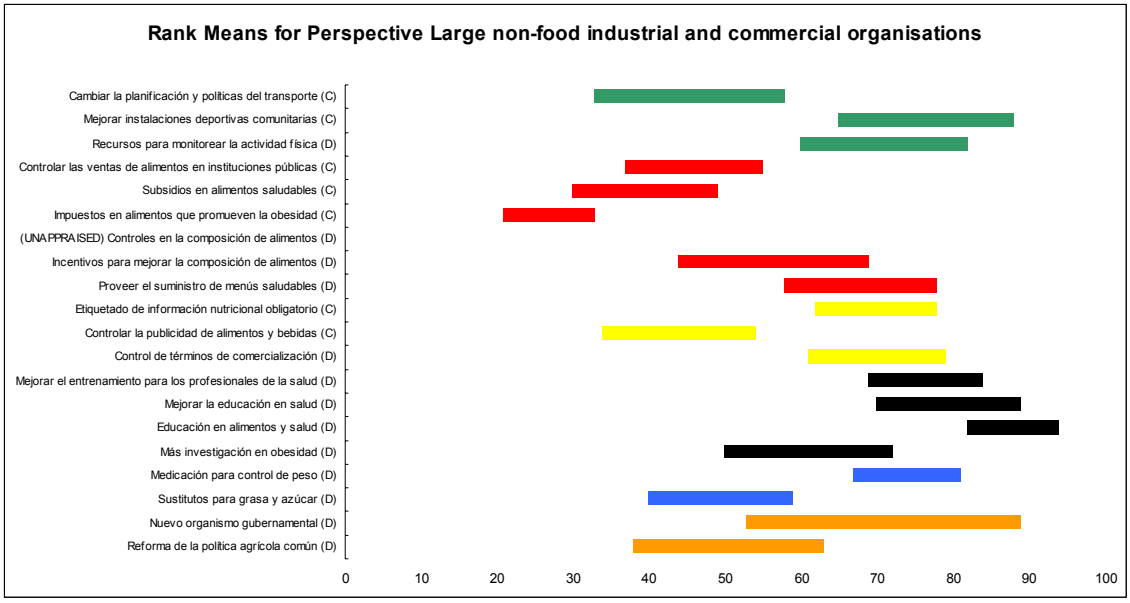
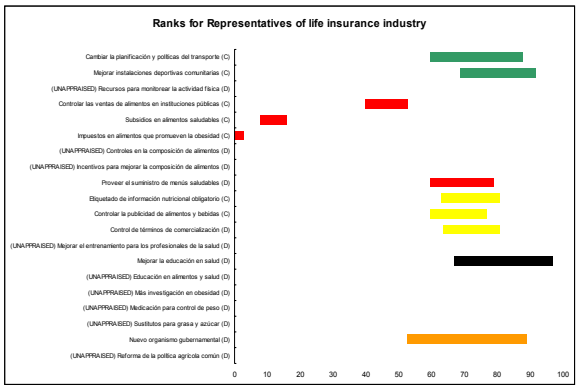
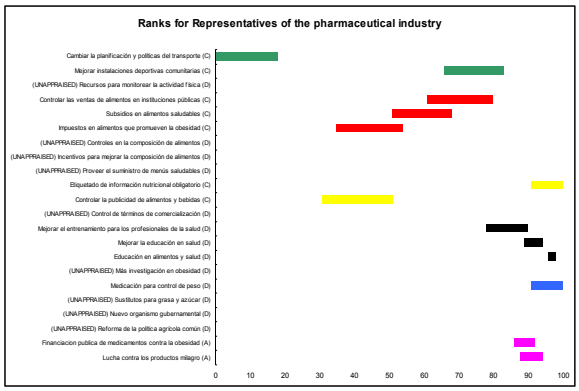


Fig. Individual Participants in perspective D. Large non-food industrial and commercial organisations.





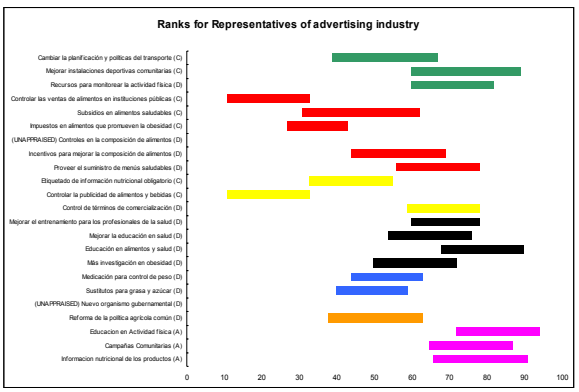
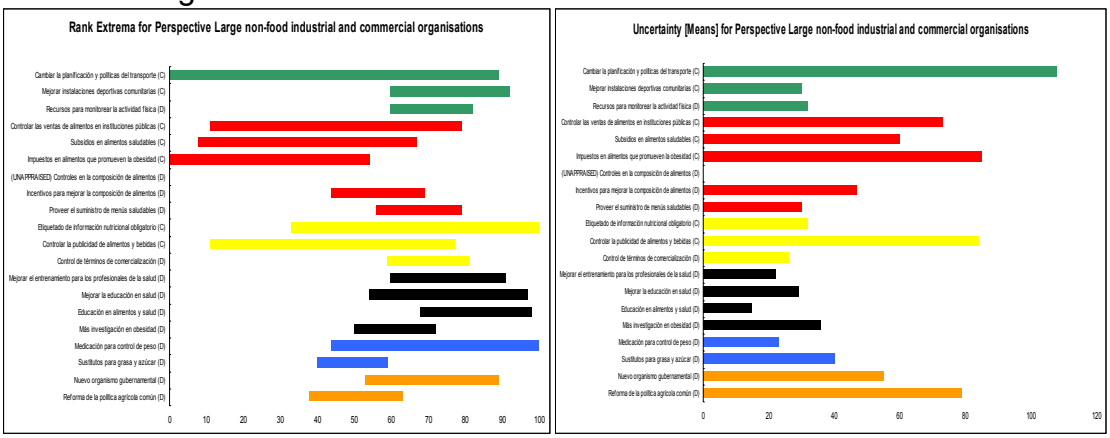


Fig Extreme ranks and position for Perspective D. Large non-food industrial and commercial organisations.



- Representatives of life insurance industry. Options Change planning and transport policies, and Improve communal sports facilities belonging to the group of options Exercise and physical activity-oriented have been scored by the participant with a high performance. Also the options Improved health education and new governmental body, though these last two ones have a higher degree of uncertainty that the two previous ones. As happens with the other participants, the options Subsidies on healthy foods and taxes on obesity-promoting foods are the ones with the worst performance, as well as low degree of performance. This way the participant shows his disagreement with these options. In general, with the exception of the last two options above mentioned, the others show a high performance. The difference among the options is very high, because in some cases they have high performance and in others a low performance. This shows the different opinions of the participant regarding the global set of options.

- Representatives of adevertising industry. The Options Controlling Sales Of Food In Public Institutions, Incentives To Improve The Food Composition, incentives for caterers to provide healthier menus, belonging to the group of options Modifying the supply and demand for foodstuffs, present among them a significantly high dispersion. Furthermore, they also have a high degree of uncertainty, which indicates that the participant has very different options among options of the same group. With the group Informational Initiatives the same happens. It means that options Control on food And Drink Advertising, Mandatory Nutritional Information Labeling And Control Of Marketing Terms, show a dispersion very high as well as uncertainty. The high degree of dispersion shows that for the same group there are options with very low performance (the worst) and options with high performance. In fact, the options Controlling Sales Of Foods In Public Institutions, And Control Food And Drink Advertising there is a very low performance and within the corresponding group there are some options with high performance as: incentives for caterers to provide Catering Of Healthy Menus, Control Of Marketing Terms. In spite of that, the options with higher performance are Education Of Physical Activity (Additional), Products Nutritional Information (Additional), Improve Communal Sports Facilities And Food And Health Education.

- Representatives of pharmaceutical industry. In the team of all options, the participant transmits the higher degree of dispersion, polarizing the options between the worst and the best performance, accumulating almost all of them in the highest degree of performance (or a high one) and one in the worst. The options with the best performance are: Mandatory nutritional information labeling, and Medication for weight control. On the contrary, the option with the worst performance (minimum) is Change planning and transport policies. The other options show a high degree of performance and as a whole almost all of them have a low degree of uncertainty.

E. Policy Makers

In this group a clear coincidence is seen in the medium-low trend of the valuing for almost all the options and highlights the option on Taxes on obesity-promoting food as the one with the worst performance. In the analysis as a whole as perspective, the best option for both participants is Controlling sales of foods in public institutions, though one of them assigned a higher score to the option on food and health education.

Fig. Medium ranks for all participants in perspective E. Policy makers.

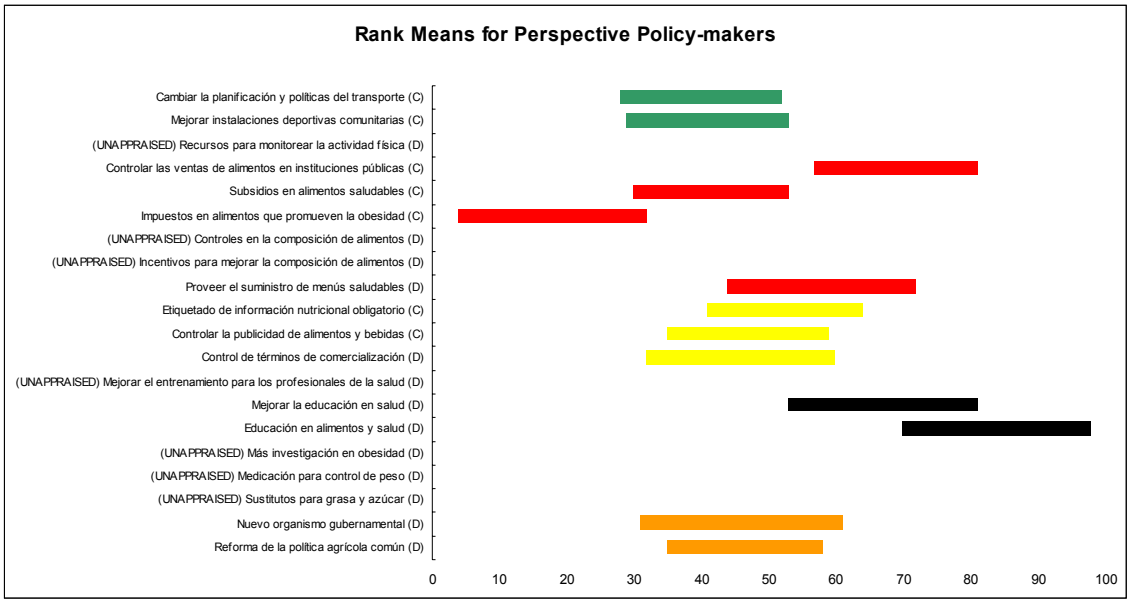
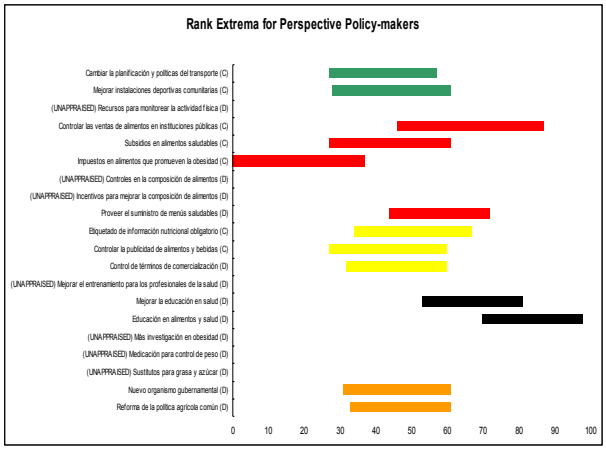
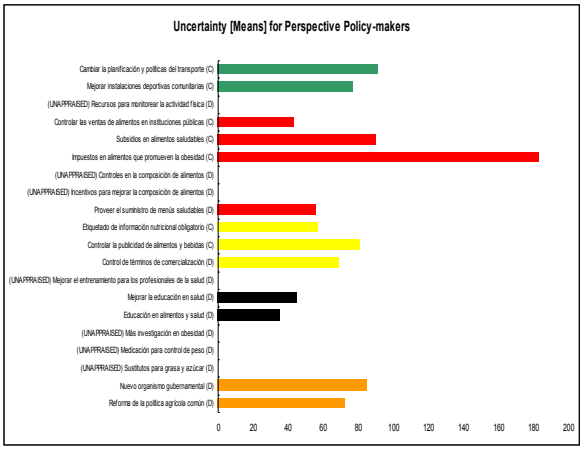


Fig. Extreme ranks and position for perspective E. Policy makers.

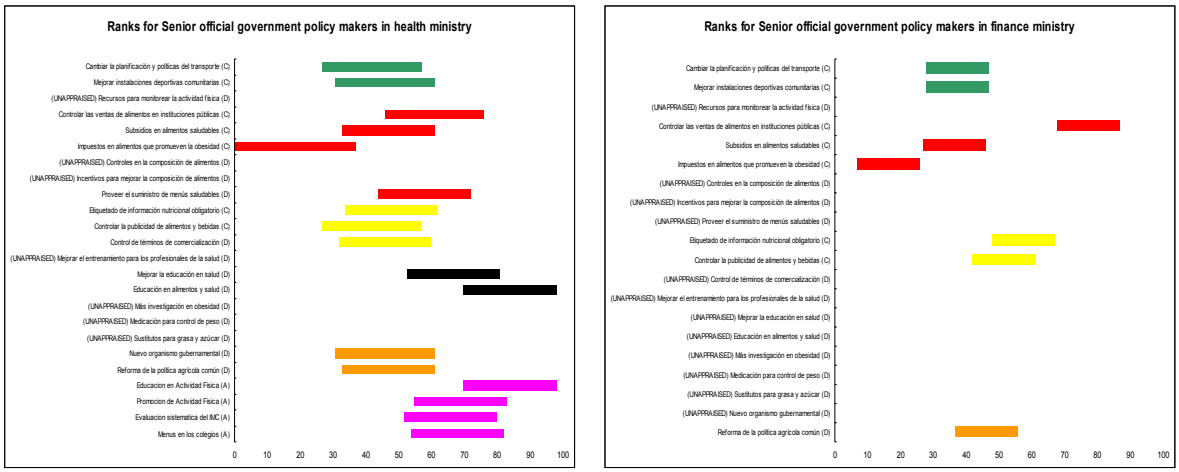




- Senior official government policy makers in health ministry. The options on Food And Health Education And Physical Activity Education (additional) are the options with the highest performance for the participant. The lowest one (the worst) is Tax on obesity-promoting foods. As a whole, the options show a very high dispersion and uncertainty. However, if the aforementioned options are excluded, the dispersion will be significantly reduced, though the degree of uncertainty still remains high.

- Senior official government policy makers in finance ministry. The participant only values the core options, adding a discretional option. Of all of them the highest one (high) is Controlling sales of food in public institutions, and the lowest one is Tax on obesity-promoting foods. The other options show a medium performance, besides showing the low dispersion of the options among groups.

Fig. Individual participants in Perspective E. Policy makers



F. Public providers

Although the option of Create new governmental body appears as the one with better performance in the summary graphs by perspective, this option was valued only by the participants in this group. In the group analysis stand out the options on Improved health education and food and health education, as the best performance for this perspective. On the other hand, there are clear differences among the participants in the scoring of the options Mandatory Nutritional Information Labeling, Control of food and drink marketing, controlling sales of food in public institutions, for which the participants value from the lowest ranks until the highest ones.

Fig. Medium ranks for all the participants in Perspective F. Public providers

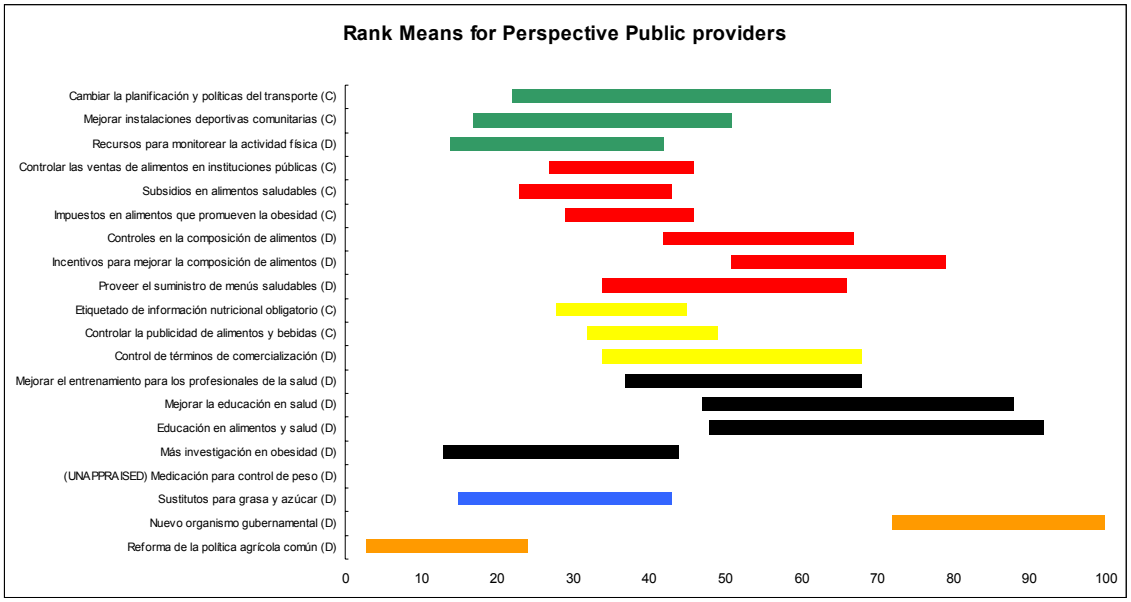
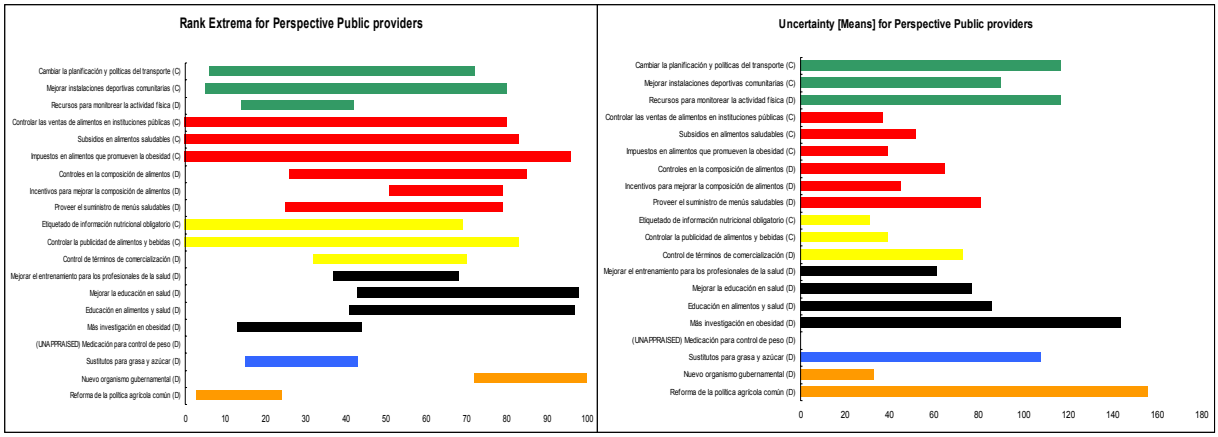


Fig. Extreme Ranks and position for Perspective F. Public providers

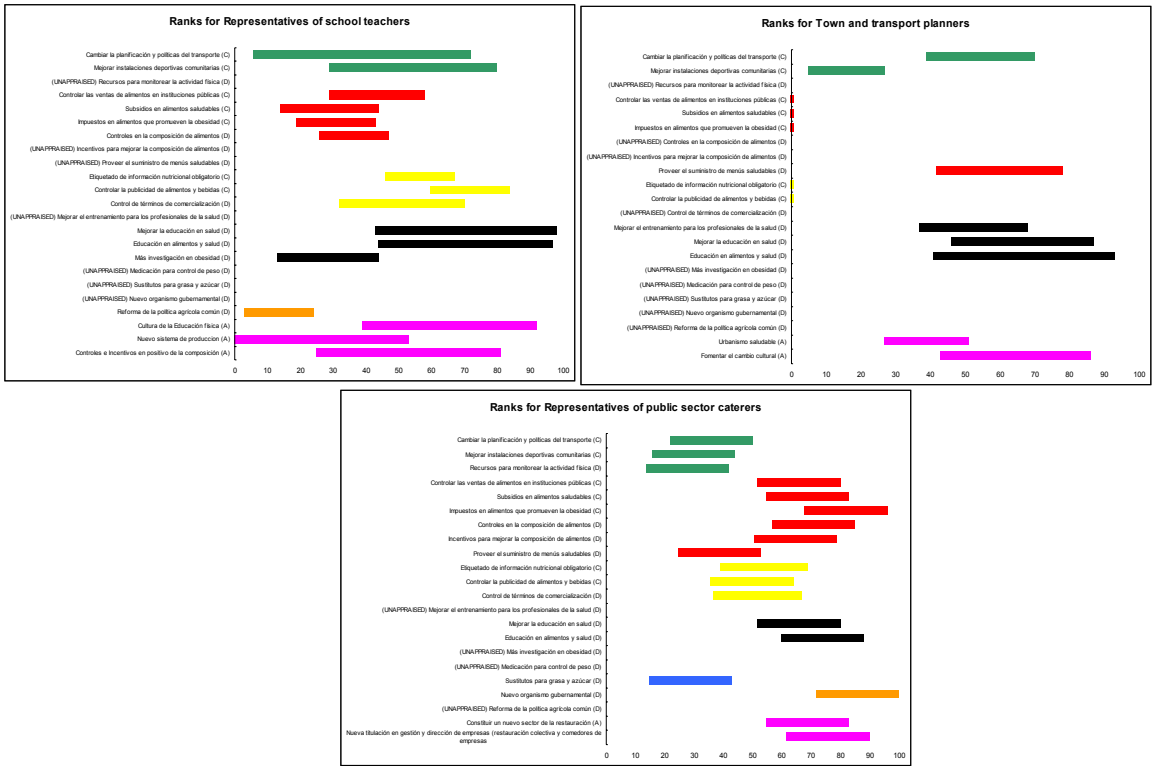


- Representatives of public sector caterers. The option of New Government body stands out, followed by Tax on obesity –promoting food. This last one has for most of the participants a very low performance and at times the worst. The option with the lowest performance is Substitutes for fat and sugar. As a whole, it can be seen a high degree of dispersion among all the groups, thus indicating the participant the variability in the performance among the total set of options.

- Town and transport planners. The Options: Controlling Sales Of Food In Public Institutions, Mandatory Nutritional Information Labeling And Control Of Food And Drink Advertising, Subsidies On Healthy Food And Taxes On Obesity-Promoting Food, show for this participant, the worst possible performance and no uncertainty. It means that the participant totally disagrees with these options. As it happens with many participants, the options with better performance are: Food and health Education, And Improved Health Education, followed by Foment cultural change (additional).

- Representatives of school teachers. It is remarkable the high degree of uncertainty that show the options Change planning and transport policies, Improve communal sports facilities along with the options Improved health education, food and health education, physical education culture, new system of production and control and incentives in positive composition. These last three ones are additional options proposed by the participant, and a great degree of uncertainty can also be seen in them. The fact that these options have such a high degree of uncertainty (some move from a very low performance to a very high one) implies that for the participant, the performance of these options vary. The options with the worst performance are: New system of production, Common Agriculture Policy Reform and Change Planning and transport Policies. Options with a high performance are: Improved health education, food and health education and Control of food and drink advertising.

Fig. Individual participants in Perspective. F. Public Providers



G. Public Health specialist

In general terms, all the options are valued in a medium-high scale of performance. Findings are that those which contribute most to solve the obesity problem, are heterogenous for each one of the participants in this perspective. Two participants can agree in some of them: *Improved Health Education, Food And Health Education, Control Food And Drink Advertising*. In this group outstands the high performance assigned to the option on *Subsidies on healthy fo*od, which remarkably differs from the other analyzed perspectives. The option on *Tax On Obesity-Promoting Food* is seen with the lowest performance.

Fig. Medium ranks for all participants in Perspective G. Public health specialist

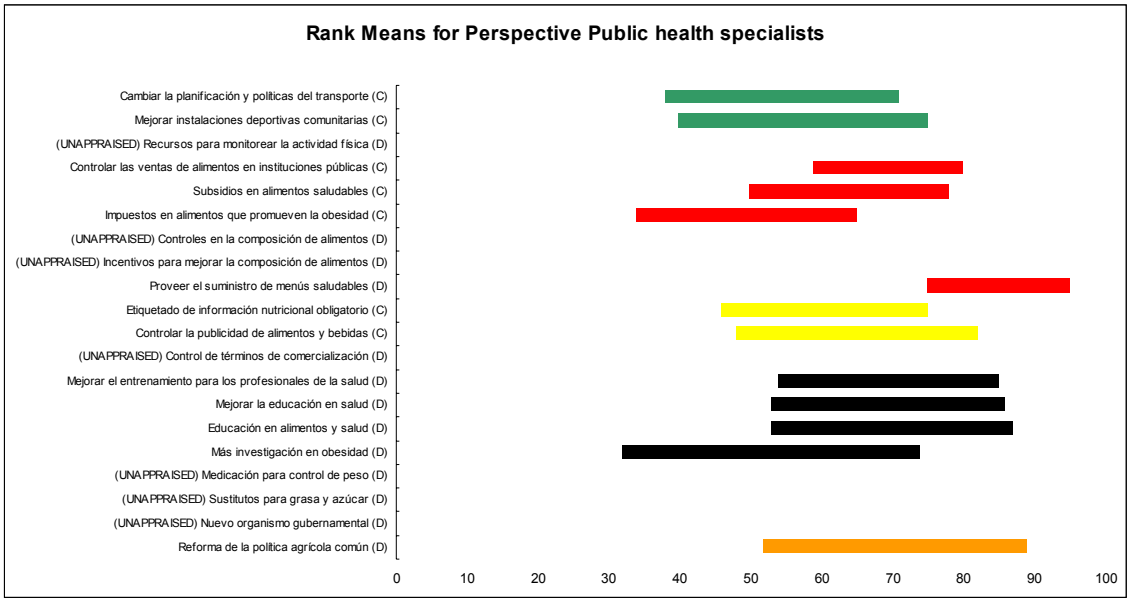
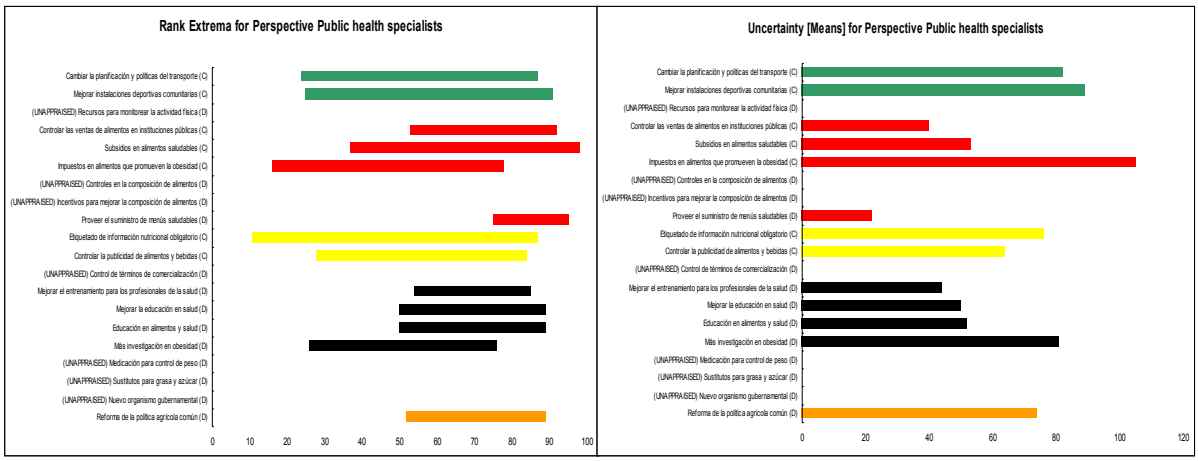


Fig. Extreme ranks and position for perspective G. Public health specialist



- Public Health Professionals. All the scored options show a high performance. Furthermore, the options have in general a low dispersion. It means that they all concentrate in the same zone (high performance) thus showing the participant's conformity with such options. The lowest scored options by the participant are: Improve communal sports facilities, Change planning and transport policies, Tax on obesity-promoting food, More research into Obesity and Obesity Culture. The options with better performance are: Subsidies on healthy foods, geographical accessibility, provide healthier catering menus, and controlling sales of foods in public institutions. It must be said that the participant assigns a high performance to the option Subsidies on healthy food, whilst such option has had a very low score for the other participants.

- Members of expert nutrition/obesity advisory committees. According to the participant, the options that show a higher performance are: Improved health education, food and health education, Improve training to health professionals, and Improve communal sports facilities. The options with the worst performance are: Mandatory nutritional information labeling and tax on obesity-promoting food. In general the options have a medium degree of uncertainty and in particular Control food and drink advertising, has a high degree of uncertainty. Therefore, there is a high degree of dispersion as a whole.

- Health journalistS. The options belonging to these groups of options Exercise and physical activity-oriented and educational and research initiatives, show a high degree of uncertainty. However, the rest of options show a very low degree. In general, the set of options have a low level of dispersion. The options with the highest performance are: Mandatory nutritional information labeling, Improved health education, food and health education, and the additional option Nutritional commandments. The options with the worst performance are: Change planning and transport policies; Improve Communal Sports facilities, and More research into obesity. Having into account that this last one has too much uncertainty, and changes from a low to a high performance.

Tabla ZZ. General valuation of options by participant

Opciones Part	icipantes*																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Change planning and transport policies (C)		☺				☺			☹		☺		☹					☹	☺		
Improve communal sports facilities. (C)							☺		☹		☺					☹	☹		☺		
Resources for monitoring the physical activity (D)							☺									☹					
Sales control of foods in public institutions (C)		☹							☹			☹			☺		☹		☺		
Subsidies in healthy foods (C)	☹					☹					☹					☺	☹		☺		
Taxes on obesity-promoting foods (C)	☹			☹	☹	☹			☹		☹					☺	☹		☺		
Control in the food composition (D)	☺															☺		☹			
Incentives to improve food composition (D)			☹	☺												☺					
Provide the supply on healthy menus(D)			☹													☹			☺		
Controls on food and drink advertising (C)		☹	☹	☺			☹						☺				☹			☹	
Mandatory nutrition information labelling (C)	☺	☺		☹					☹			☹					☹				
Control the use of marketing terms("diet", "light", etc. (D)			☹	☺					☹		☺	☺									
Improve training for health professional in obesity care and prevention. (D)							☺						☺							☺	
Improve health education (D)			☺	☹	☺		☺				☺		☺								
Education on food and health (D)					☺								☺	☺			☹	☺			
More research into obesity (D)			☺						☺									☹		☺	☹
Medication to control body weight (D)												☹	☺								
Syntetic fats and artficial sweeteners (D)				☺				☹								☹					
New Government institution (D)			☹								☺					☺					
Common Agricultural Policy Reform (D)				☺														☹	☺		

*Participants:

1. Representatives of consumer groups
2. Public health non-governmental representatives
3. public interets sport aand fitness NGOs
4. Representative of trades unions
5. Farming industry representative
6. Food processing company
7. Representative of large comercial catering chains
8. Representatives of large food retailers
9. Representative of small "health" food retailers
10. Representative of commercial sports or fitness providers
11. Representatives of life insurance industry
12. Representatives of commercial sport or fitness providers
13. Representatives of the pharmaceutical industry
14. Senior official government policy makers in health ministry
15. Senior official government policy makers in finance ministry
16. Representatives of public sector caterers
17. Town and transport planners
18. Representative of school teachers
19. Public Health professional
20. menbers of expert nutrition/obesity advisory committees
21. Health journalists

Table Z1. General valuation of options by participant

	Perspectiva						
Opciones	**A**	**B**	**C**	**D**	**E**	**F**	**G**
Change planning and transport policies (C)			☹				
Improve communal sports facilities. (C)	☺	☺		☺			
Resources for monitoring the physical activity (D)							
Sales control of foods in public institutions (C)					☺		
Subsidies in healthy foods (C)	☹	☹		☹			☺
Taxes on obesity-promoting foods (C)	☹	☹	☹	☹	☹		
Control in the food composition (D)							
Incentives to improve food composition (D)	☺	☺				☺	
Provide the supply on healthy menus(D)		☺					☺
Controls on food and drink advertising (C)							
Mandatory nutrition information labelling (C)	☺						☺
Control the use of marketing terms(“diet”, “light”, etc. (D)			☹				
Improve training for health professional in obesity care and prevention. (D)		☺					☺
Improve health education (D)	☺	☺	☺	☺	☺	☺	☺
Education on food and health (D)	☺	☺	☺	☺		☺	☺
More research into obesity (D)	☺		☺				
Medication to control body weight (D)							
Syntetic fats and artficial sweeteners (D)	☺						
New Government institution (D)	☹		☺	☺		☺	
Common Agricultural Policy Reform (D)						☹	☺

A. Public interest Non-Governmental organisations
B. Food chain large industrial and commercial organisations
C. Small food and fitness commercial organisations
D. Large non-food industrial and commercial organisations
E. Policy Makers
F. Public providers
G. Publichealth specialists

11.5 Overall conclusions.

1.- The prevalence of obesity in Spain had a rise in the last quarter of the last century, doubling the figures from 8% in 1987 to 14% in 2001.The trends for overweight follow a similar pattern with 16% in 1987 and 38.5% in 2001.

2.- The increase in obesity during the period was higher women, in the population older than 45 and with lower educational attainment.

3.- Obesity in Spain follows a gendered pattern, in infant population is more prevalent in males and more prevalent in females in adult population.

4.-Economic costs of obesity in Spain are 7% of the Health expenditure. An important increase could be forecasted for the future as obese population will increase by 35% in the next 25 years.

5.-Energy consumption trends show a increase of 593 Kcal per capita and day from 1970 to 2002 and the rate of regular physical exercise also show a rising trends. The determinants of the increase of obesity in Spain are due to social inequalities, specially gender and social class.

6.- Policy responses to this issue are still underdeveloped. Until now true policies to combat obesity have not been developed, being just in the stage of policy formulation as the NAOS strategy and several other documents in autonomous communities.

7.- The Spanish Agency for Food Security, which has among their competences the promotion of health, is the adequate institution to develop in the future a true set of policies to ameliorate the effects of obesity in Spain

- **MCM analysis**

There are several ways to conclude messages from these MCM analysis. We have preferred to follow more the discursive structure of the results than the different steps followed by the methodology, we will start from the general and then go to particular cases. So we will present firstly results concerning overall positions of all stake holders, then present main conclusions by issues and perspectives

Positions of all stake holders

1.- Educational and research initiatives is the cluster of options receiving more support both in optimistic and pessimistic scenarios. Stakeholders have a high degree of agreement, near to total consensus on the room offered by education as a policy tool to cope with the epidemic of obesity.

2.-Conversely, Fiscal measures (subsidies and taxes) are the options receiving less support. Just the stakeholders under the perspective of Public Health Specialist give this options scores high enough to place fiscal measures in an optimistic scenario.

3.-Discretional options received more support than the core options or the additional ones, reflecting perhaps limitations of the Porgrow Team in selecting the list of core options.

4.-Narratives of the stakeholders seems polarised in the dichotomy individual-society, reflecting perhaps different ideological positions.

Conclusions by issues

1.-Societal benefits and efficacy in addressing obesity are the issues with a higher relative weight. Efficacy in addressing obesity is considered mainly by the stakeholders of the private sector whereas societal benefits are considered mainly by the stakeholders of the public sector.

2.- Extra health benefits is the issue raising more level of positive agreement among the stakeholders considering criteria in this issue. Health seems to be a common desired outcome for Public Providers, Food Chains Large Industries and Commercial Organisations and Public Interest Non-governmental organisations

3.-Economic Impact issues were not considered as relevant , specially the issue of Economic Impact on Commercial sector receives no criteria to be included in teh ranking.

Conclusions by perspectives

1.- The analysis by perspectives confirms the previous findings of a high level of consensus supporting educational and research initiatives and rejecting fiscal measures (subsidies and taxes)
2.-The highest level of uncertainty is reached by change planning and transport and fiscal measures (subsidies and taxes)

3.- The option cluster referred to technological innovations is not considered as relevant by the different perspectives. Whereas Institutional reforms reflects a high level of polarisation between different stakeholders within different perspectives

Section 12. Evaluation Process

12.1 Evaluation and Results Process

At the time of finalizing the interview with each one of the participants, these ones were invited to express their opinion, critics, or any comment that they would like to do about the process. In general terms, the participants were happy with the experience and showed their conformity with the fact that this type of projects bring important and positive information about policy making orientated to the solution of the obesity problem. The possibility offered by the system to dialogue, lead to critical reflection about the same opinions, and feedback and redirect previously scored topics was also highlighted. Moreover, the importance of the role played by the interviewers as mediators of the process without influencing the participant's opinion was also emphasized. However, it also considers the application of these initiatives, the interest of public and private institutions, the commercial and economic interests, etc.

About the methodology it was found to be adequate, strict and well structured, although there is a concern about the importance of the previous preparation by the participant, the wide paper work and the technical language used which could make difficult the understanding of the process. In this regard, a more comprehensible and schematic approach is suggested. Some participants also considered as a weakness the fact that the policies of options had been previously established, and they suggested to give participants the freedom to propose their own political options (without establishing initiatives that could orientate participants in any sense).

The different arguments of the participants in the full scoring process are shown below:

This project will obtain a lot of knowledge, but in public health knowledge does not mean modification of the social behaviour and attitude "FOR YES". *To make it happen, the resultant proposals of all stakeholders should be able to be executed, which is unlikely. If this knowledge implies social solutions, from all the actors, then YES*. (Cat 21 Representatives of trades unions)

The fact that options imply a legislative change should not limit the action. The methodology is adequate, demanding, its efficacy will depend on the people interviewed. (Cat 7 Representatives of consumer groups)

The interviewing process is very clear. Paper work is difficult to handle, it is not only a matter to read it, it would be better to have a more graphic method. The example is good, a better design could be done to make it less dense. (Cat 20 Public interest sport and fitness NGOs)

In the long turn this research will have a positive result. (Cat 20 Public interest sport and fitness NGOs)

What calls most the attention is that the process is well designed. (Cat 20 Public interest sport and fitness NGOs)

Regarding the interview with the suggested methodology, it considers that it is very much determined by the additional options to be discussed. Little emphasis has been given to the group of discretional options in which case the result cannot be robust to the proposal of complimentary alternatives. (Cat 9 Senior official government policy makers in finance ministry*).*

When reading the proposal, the creation of alternatives is very much highlighted *… You end up with little variations attached to the initial proposals. Let's say: think of four strategies to combat Obesity and write them down on a white paper (without any suggestion), surely it is easier, ad hoc specific policies per collective and not general policies, i.e.: if obesity is in the manufacturing sector and with poor lifestyles, a policy that liaises a reduction of the social conditionings to the reduction of the working days missed by sick leave related to obesity, it could interest more to the entrepreneur or worker. (Cat 9* Senior official government policy makers in finance ministry*).*

The participant considers that this result of the project is possitive, it would be interesting to double check the cost benefit with the information in so far as in this moment it is only answered from a perception. (Cat 8 Senior official government policy makers in health ministry*).*

As analysis of the situation of start of the project this is well focused, in the strategic evaluation the participation of people with more concrete suggestions for measures will be required. (Cat1 Farming industry representatives*)*

In the participant's opinion the research is adequate to help the authorities to value the options and this is a guarantee for the decision making process. However, this is a complicated matter that requires a decisive and sustained intervention in the time. "*Once decisions are taken, what will be difficult and expensive will be to apply them, this is another matter". Regarding the process of the interview: Emphasis is given to the importance to know and prepare beforehand the information available to the participant, the way it flew was adequate and he did not feel influenced. (Cat 4* Representatives of large food retailers*)*

The investigation is an instrument that can or cannot reach the decision makers, but in this case he believes it acts as an instrument. It will be helpful at this level. (Cat 3 Representatives of large commercial catering chains*)*

The best of this process is the possibility of the system to establish a dialogue, a talk to present the vision of the problem and adjust it in the system. In his opinion, this is the most serious survey up to now. (Cat 2 Food processing company representatives*)*

It is good that different professionals form part of the project's team, this is a wide topic and affects many people. That is why it is good to have different opinions, to get a wide range of opinions. The only way to solve the problem of obesity is through the realization of projects of this type. (Cat 5 Representatives of small 'health' food retailers*)*

To keep moving one has to have initiatives, this project is good to initiate co-ordinated campaigns in the EU on the obesity topic. (Cat 5 Representatives of small 'health' food retailers*)*

It considers that research on the obesity topic must be taken seriously, because it is a problem, we are at the iceberg end and in some years it will be much more important. It depends on the final result, it will be the influence of this project. (Cat 13 Representatives of commercial sport or fitness providers*)*

The results of this research will be useful, the problems from multi sector causes and origins demand multiple solutions and the contribution is positive. In the interview process there is not any suggestion, may be insist on the participant in the preparation, but it doesn't seem clear how, an appointment to let him time to think and then come back for the interview. Introductory interview of half an hour of explanation a couple of days before. (Cat17 Representatives of advertising industry*)*

It considers that "Everything helps" and is useful although the set objectives in relation to obesity do not depend on this report, but on the political willingness. The execution of the interview is excellent. May be it takes too long, "it could be done in less time but it would be worst" (Cat 18 Representatives of the pharmaceutical industry*)*

The best part of the process is the informatics programme applied and the capacity of the participant to carry out the interview. If the interviewer is not knowledgeable about the topic, probably the results would be different, but it does not mean that they were influenced, it is the capacity to translate and understand what the participant is saying. This is very good.. (Cat12 Representatives of life insurance industry*)*

In the participant's opinion, the results of this project will allow finding the necessary policies, but there can be some difficulties to apply them due to the interest of the public and private institutions, more if there is an interest on people to solve the problem and many times there is no clue on how to combat it. It is difficult for the family, the person, but it doesn't know how, the State does know but is not interested or is tied up by its economic and commercial interests. (Cat14 Representatives of school teachers*)*

It considers that the results of the research will help to take decisions on the topic, "It is fine to have this kind of process". However, he asks, "Is it possible to retake the process to brush up the result? It feels that there are still some doubts about the certainty of the statement because it is not easy to value the criteria of some measures, it is complicated, if the results could be retaken the next day, probably there would be better results. (Cat16 Health journalists*)*

This project as proposed can contribute to solve the problem of obesity. It considers that the methodology of the interview could be more of a group and thus the participant would have a major Feedback, as it is now being carried out, the information is left with fewer possibilities of modification.
. (Cat 15 Members of expert nutrition/obesity advisory committees*)*

12.2 Critical reflections:
Strengths, weaknesses, open questions, and aspects for future investigations

12.2.1 Preparation Phase:

For the research team, this phase is considered an achievement in the development of the research, catering stands out and the availability of the paper work to familiarize with the methodology. Moreover, the execution of the first joint training workshop is very appropriate, although this could be planned with extra day to emphasize on the aspects related to the software management and solving problem strategies already identified as expected. Regarding the availability of equipments, it would be necessary to include as basic work material (besides the one already included), a recorder with USB port, a keyboard for laptop and a big table (foldable one).

Regarding the application of this phase by the participants, this is considered an important limitation to take into account, the long required reading and the technical language of the narrative. It is a very common situation to arrive for the interview and then realize that one does not enough knowledge to participate in the most effective way. It must be said that this situation is not solve with the previous telephone contact, due to the fact that in many cases, these were made with the secretary or personnel in charge, without actually reaching the participants with enough time to discuss methodological aspects of the interview.

A strength to highlight is the software provided which is easy to manage. It allows to store a big quantity of information and particularly to see immediately the results reached by each one of the participants, thus allowing to confirm or correct them

12.2.2 Phase or information gathering:

Due to the difficulty shown by the participants when defining the criteria, to improve the previous information provide is very important.
In some cases some participants showed a negative attitude due to their lack of interest in the project.
Due to the professional character of some of the participants the time availability was not respected although having made appointments in advance.

As strength stands out the possibility to acknowledge and share the persons directly and indirectly related with the obesity problem for the execution of future works and joint projects.

12.2.3 Analysis Phase:

When it comes to obtain graph results, the software is a tool provided by the coordinator team with various strengths: simplicity to download the obtained data of MCMpaper, it is a very intuitive method when creating the Excel graphs,

creates an interpretation form to facilitate work, allows to export such graphs to other applications
A weakness identified is that the software does not allow making a certain type of graph created by the coordinator team (graphs referred to the hihg and low options ranks).

Another strength of the software is that it allows making and seeing a summary of the data including the key words of each participant. It is designed as a website through the local server of the computer, being able to export such information to other applications.

In some cases there were remarks of participants who did not have the same score. Thus, the resulting graphs belong to the average with opposite scores.

Certain deadlines were not met for the integral development of the report, being necessary to repeat some phases already prepared and therefore this caused delays in the process.

It must be said that in the selection of participants only two women participate among nineteen men, which reflects a higher assignment of managerial posts to men.

Some participants can be reflecting options from different perspectives in relation to the ones that were selected, which can explain the multiple posts as held by some persons.

Finally, due to the short time available, the little possibility to involve the stakeholders in the analysis of results, as well as the little possibility to include the obesity policy makers in Spain to really use the results in the research of the reformulation of the policies.

Considerations for future research:

- Economic cost of obesity
- Food consumption studies
- Studies of physical activity and other indicators related to the energetic expenditure
- Studies of analysis of nutrition policies in the field of research
- Studies of the impact of nutritional policies
- Comparison of the different groups between countries by perspectives, results and clusters.